Viking M

Service Manual

English

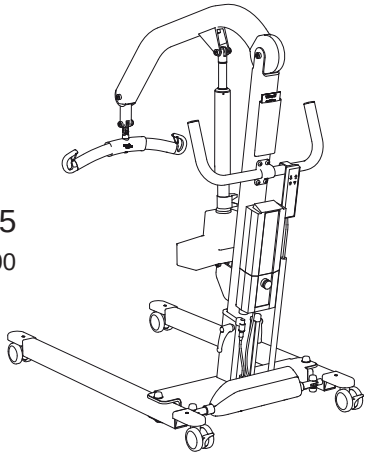
Prod. No. 2040005, 2040015, 2040035

3EN370401-16
2012-12-27

Proj. 1707

Prod. No. 2040005

S/N 7 100 101-7 200 200



Prod. No. 2040015

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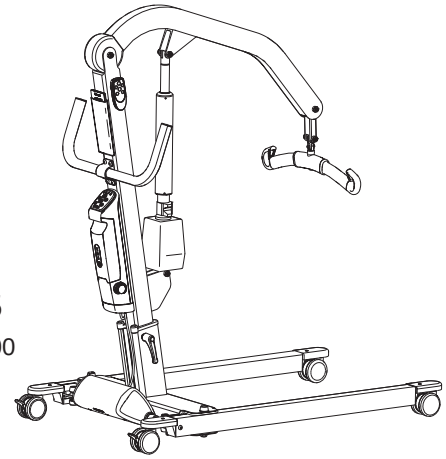
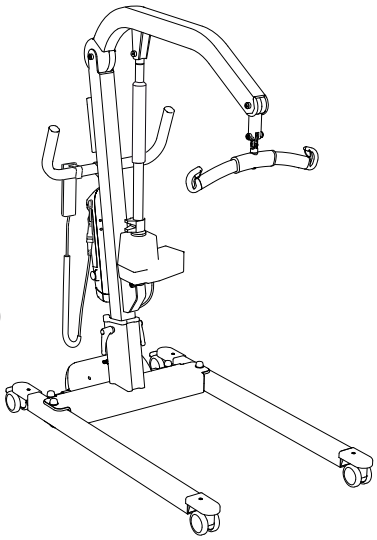


Prod. No. 2040035

S/N 9 200 001 - 9 300 000



Liko

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For information regarding Service and Maintenance education, contact your Hill-Rom/Liko representative.
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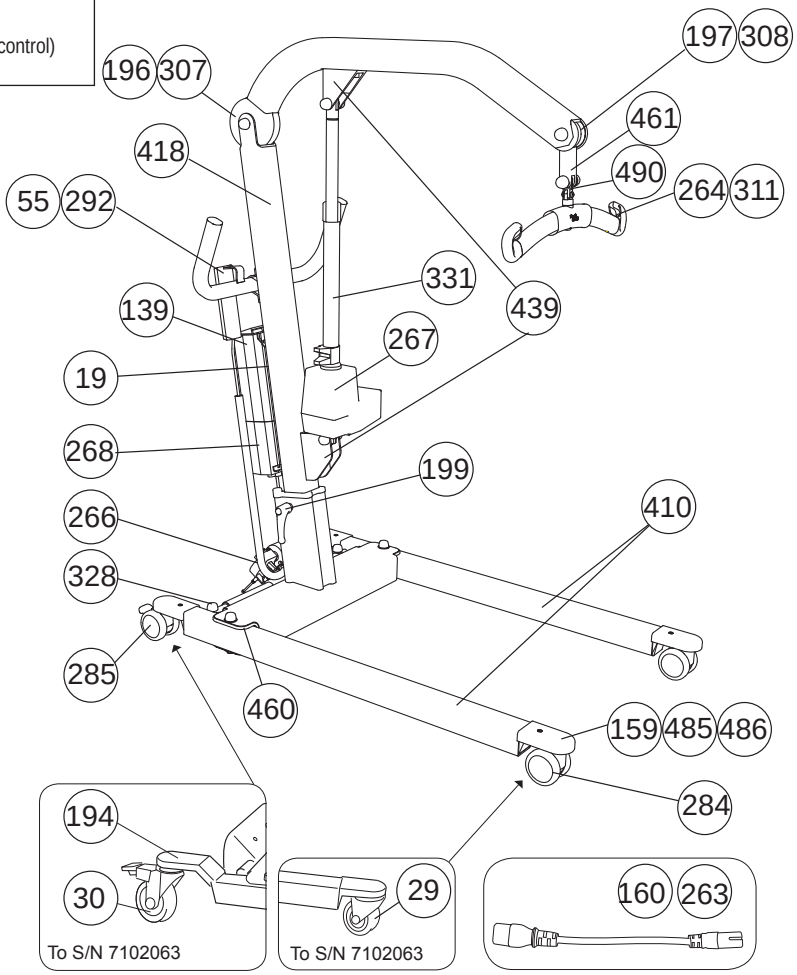
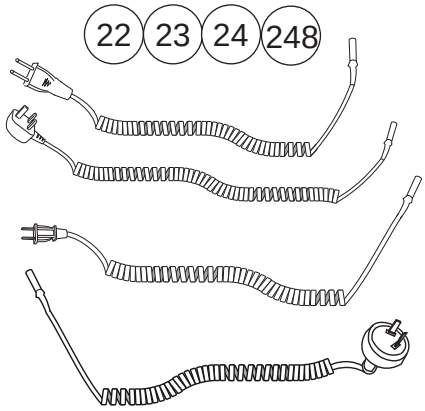
Spare Parts Positions

PROD. NO.	PRODUCT
2040005	Viking M
2040015	Viking M (intelligent control box)
2040035	Viking M (intelligent control box and cable hand control)

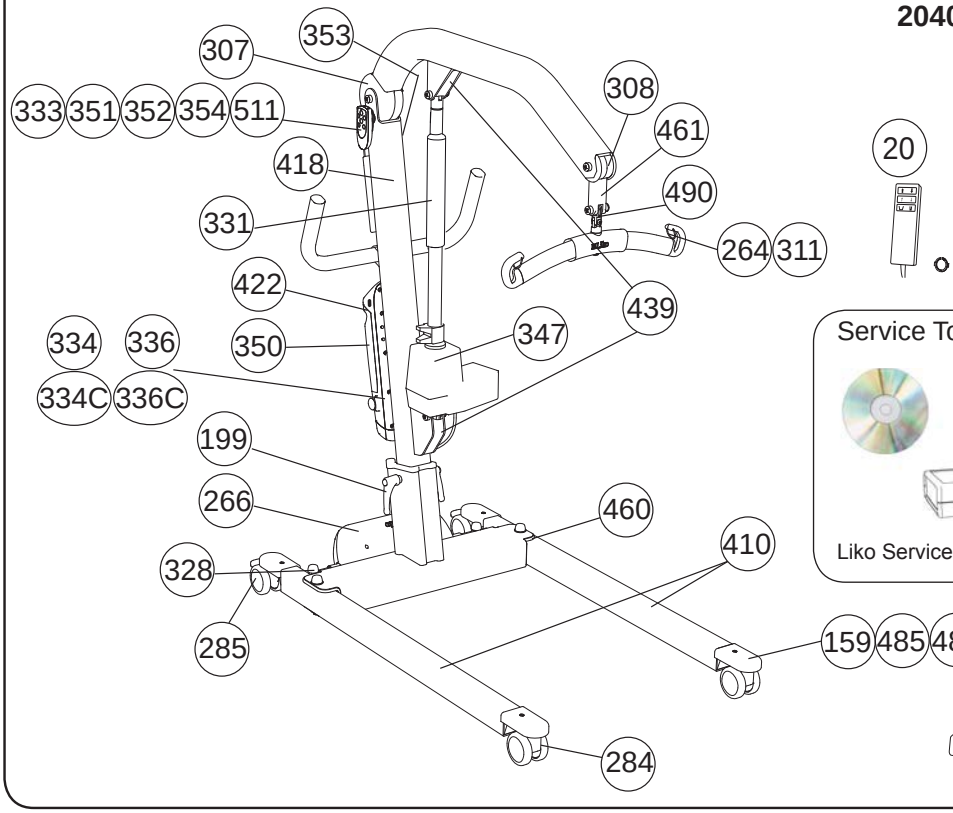
Product No. 2040005 (S/N 7100101-7200200)



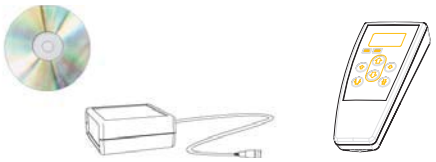
Fits Viking M, all models:



Product No. 2040015 (S/N 7 500 401 - 7 600 500)
2040035 (S/N 9 200 001 - 9 300 000)



Service Tools, see page 79



Liko Service System

Liko Diagnostic System

Technical Data

Viking M, Prod. No. 2040005

Lifting speed: 3.5 cm/s (1.4 inch./s) without load

Batteries: Two 12 V 2.9 Ah valve-regulated lead-acid gel-type batteries. New batteries are provided by the supplier.

Battery charger: Built-in charger, 100-240 VAC, 50-60 Hz, max 400mA

Motor (mast): 24 V, 9.2 A, permanent magnetic motor with mechanical safety mechanism and safety nut.

Motor (base): 24 V, 5.5 A, permanent magnetic motor.

Material: Aluminium

Emergency lowering: Mechanical and electrical

Wheels: Front: 75 mm twin castor wheels. Rear: 75 mm brake-equipped twin castor wheels.

Intermittent operation: Int. Op 10/90, active operation max 2 min. Out of a time of 100, active must be less than 10, though not more than 2 min.

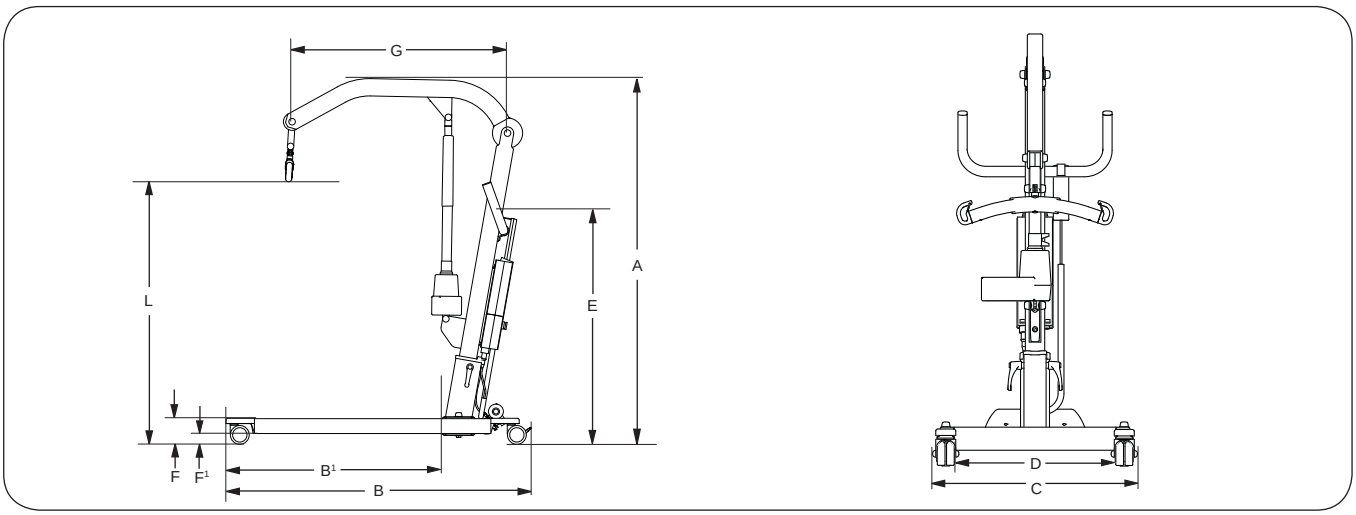
Degree of protection: IP 43

Built for indoor operation.

Type B, according to the degree of protection against electrical shock.

Class II equipment.

Measurements



Viking M	Max. load	L* Max.	L* Min.	A* Max.	A* Min.	B	B1	C	D	E*	F	F1	G	Weight Total	Weight Part	Turning diameter
A:	205	179 174 169	52 47 42	202 197 192	144 139 134	123	87	69-111	56-97	100 105 110	10,5	4,5	88	35	18	140
B:	450	70 69 67	21 19 17	80 78 76	57 55 53	49	34	27-44	22-38	39 41 43	4.1	1.6	35	77	40	55

A: Max. load and weight in kg. Measurement in cm.
B: Max. load and weight in lbs. Measurement in inch.

** These measures depend on in which hole the mast is levelled and secured.*

Technical Data
Viking M, Prod. No. 2040015

Maximum load: 205 kg (450 lbs)

Material: Aluminium

Weight: *Total weight:* 34.0 kg (75 lbs) *Heaviest part:* 15.3 kg (34 lbs)

Wheels: Front: 75 mm (3 inch.) twin wheels.
Rear: 75 mm (3 inch.) twin wheels with brakes.

Turning diameter: 1400 mm (55.2 in)

Em. Lowering: Manual and electrical

Lifting interval: 1270 mm (50.0 in)

Lifting Speed (no load): 42 mm/s and 38 mm/s, respectively (1.7 in/s and 1.5 in/s, respectively)

Sound Level: 46 dB(A)

Protection Class: IP 54

Op. Forces of Controls: HandControl: 4 N
Operation Panel: 4 N

HandControl IR Batteries: 2 AAA LR03 1.5 V.
Reach: 2 m (80 in)

Electrical Data: 24 V

Intermittent operation: Int. Op 10/90, active operation max 2 min. Only 10% of a given length of time may be active, yet no more than 2 min.

Batteries: NiMH cells, 2.2 Ah. New batteries provided by the supplier.

Battery Charger: CBL20001, built-in, 100-240 V AC, 50-60 Hz, max 600 mA.

Lift Motor: Permanent magnet motor with mechanical safety mechanism; 24 V, 8.5 A

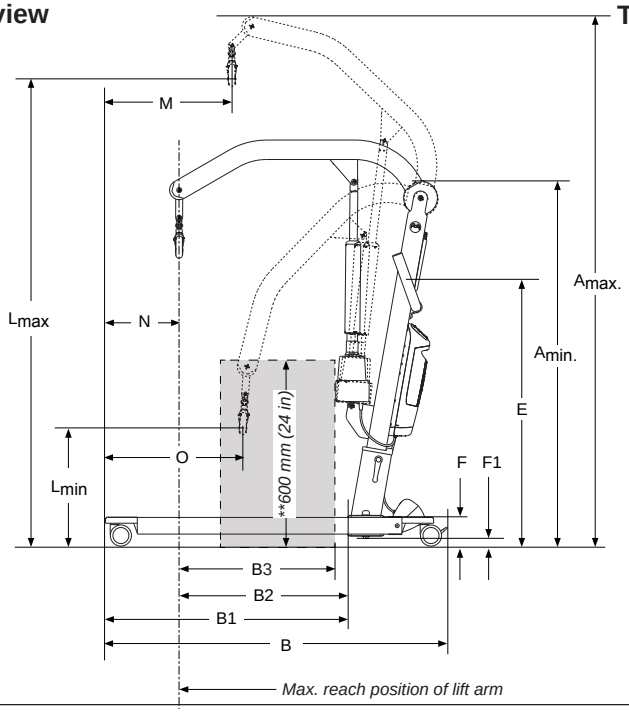
Motor for base-width adjustment: Permanent magnet motor
24 V, 6 A

The device is intended for use indoors

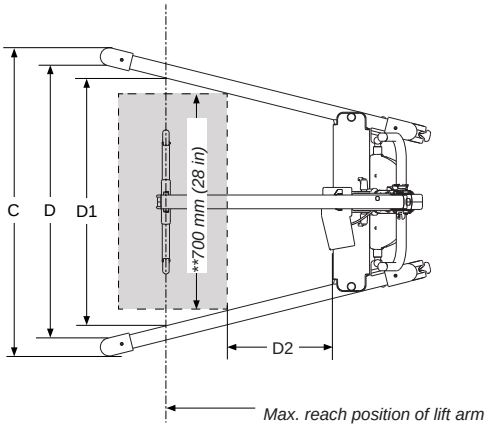
Type B, in accordance with the electrical shock protection class.

Class II equipment.

Lateral view



Top view



Measurement in mm

*Amax.**	*Amin.**	*B*	*B1*	*B2*	*B3***	*C*		*D*		*D2***	*E**	*F*	*F1*	*Lmax**	*Lmin**	*M*	*N*	*O*
						max.	*min.*	*max.*	*min.*									
2020	1440				650						1100			1790	520			
1970	1390	1230	870	660	650	1110	690	970	560	195	1050	105	30	1740	470	385	220	495
1920	1340				595						1000			1690	420			

Measurement in inch.

*A max.**	*A min.**	*B*	*B1*	*B2*	*B3*****	*C*		*D*		*D2***	*E**	*F*	*F1*	*Lmax**	*Lmin**	*M*	*N*	*O*
						max.	*min.*	*max.*	*min.*									
79.5	56.7				25.6						43.3			70.5	20.5			
77.6	54.7	48.4	34.3	26.0	25.6	43.3	27.2	38.2	22.0	7.7	41.4	4.2	1.2	68.5	18.5	15.2	8.7	19.5
75.6	52.8				23.4						39.4			66.5	16.5			

Note: The measurements are based on the lift being equipped with standard sling bar and standard wheels. When changing to other lifting accessories, or other wheels, check that the lift still achieves desired lifting height.

* Different measurements apply to Viking M depending on the height-setting position

** Reference measurement according to Standard EN ISO 10535:2006.

Technical Data
Viking M, Prod. No. 2040035

Maximum load: 205 kg (450 lbs)

Material: Aluminium

Weight: Total weight: 30,2 kg (66.6 lbs) Heaviest part: 15,8 kg (34.8 lbs)

Wheels: Front: 75 mm (3 inch.) twin wheels
Rear: 75 mm (3 inch.) twin wheels with brakes

Turning diameter 1400 mm (55.2 in)

Emergency lowering device: Mechanical and electrical

Lifting interval: 1270 mm (50.0 in)

Lifting speed (no load) 42 mm/s and 38 mm/s, respectively (1.7 in/s and 1.5 in/s, respectively)

Sound level: 46 dB(A)

Protection class: IP 54

Operating Forces of Controls: HandControl: 2.4 N
Operation Panel: 4 N

Electrical data: 24 V

Intermittent power: Int. Op 10/90, active operation max 2 min. Only 10% of a given length of time may be active, but no more than 2 min.

Batteries: NiMH cells, 2.2 Ah. New batteries provided by the supplier.

Battery charger: CBL20002, built-in, 100-240 V AC, 50-60 Hz, max 600 mA.

Lift motor: Permanent magnet motor with mechanical safety mechanism
24 V, 8.5 A

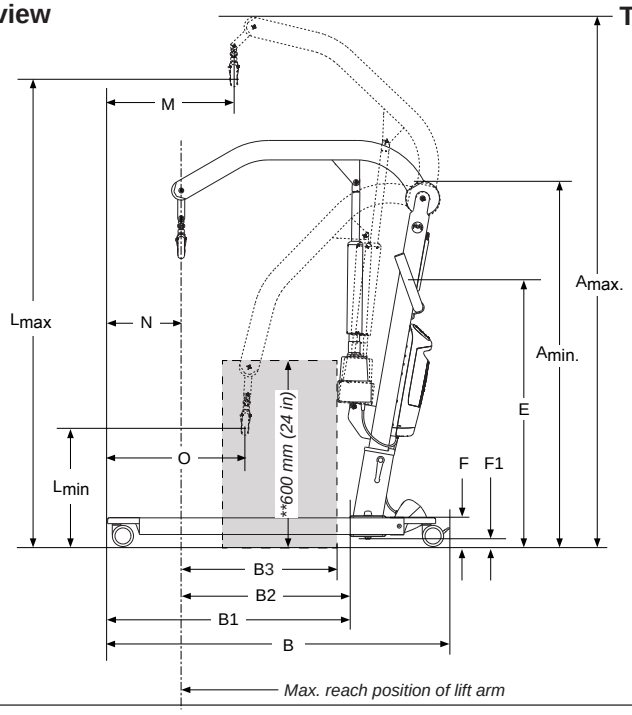
Motor for base-width adjustment: Permanent magnet motor
24 V, 6 A

The device is intended for use indoors

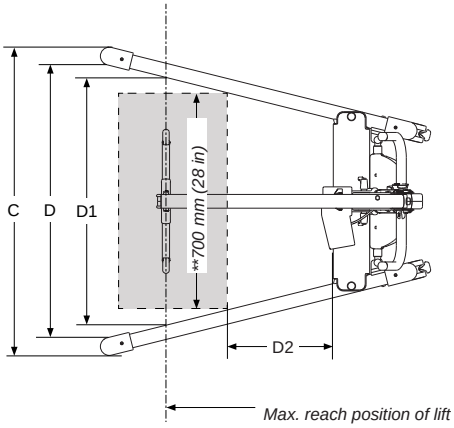
Type B, in accordance with the electrical shock protection class.

Class II equipment.

Lateral view



Top view



Measurement in mm

$A_{max.}$*	$A_{min.}$*	B	B1	B2	B3***	C		D		D2**	E*	F	F1	L_{max}*	L_{min}*	M	N	O
						max.	min.	max.	min.									
2020	1440				650						1100			1790	520			
1970	1390	1230	870	660	650	1110	690	970	560	195	1050	105	30	1740	470	385	220	495
1920	1340				595						1000			1690	420			

Measurement in inch.

$A_{max.}$*	$A_{min.}$*	B	B1	B2	B3***	C		D		D2**	E*	F	F1	L_{max}*	L_{min}*	M	N	O
						max.	min.	max.	min.									
79.5	56.7				25.6						43.3			70.5	20.5			
77.6	54.7	48.4	34.3	26.0	25.6	43.3	27.2	38.2	22.0	7.7	41.4	4.2	1.2	68.5	18.5	15.2	8.7	19.5
75.6	52.8				23.4						39.4			66.5	16.5			

Note: The measurements are based on the lift being equipped with standard sling bar and standard wheels. When changing to other lifting accessories, or other wheels, check that the lift still achieves desired lifting height.

* Different measurements apply to Viking M depending on the height-setting position

** Reference measurement according to Standard EN ISO 10535:2006.

Trouble shooting

Viking M, Prod. No. 2040005

The lift does not work up/down. Width adjustment does not work in/out.

1. Check that the emergency stop button is not pushed in.
2. Check that the cables are connected correctly.
3. Check that the charging cable is not connected to the wall socket.
4. Check that the battery is charged.
5. Check that the contact plates of the battery pack are not defective or broken off.
6. *If the lift still does not work satisfactorily, contact Liko/Hill-Rom.*

Battery charging does not work.

1. Check that the emergency stop button is not pushed in.
2. Check that the contact plates of the battery pack are not defective or broken off.
3. *If the lift still does not work satisfactorily, contact Liko/Hill-Rom.*

The lift stops in the elevated position.

1. Check that the emergency stop button is not pushed in.
2. Use the electrical emergency lowering to safely lower the patient.
3. Use the mechanical emergency lowering device (marked) to safely lower the patient.
4. Check that the battery is charged.
5. *If the lift still does not work satisfactorily, contact Liko/Hill-Rom.*

If you hear unusual sounds.

Contact Liko/Hill-Rom.

Trouble shooting

Viking M, Prod. No. 2040015

The lift does not work up/down with the HandControl IR.
The base-width adjustment doesn't work (in/out) with the HandControl IR.

1. Make sure that the emergency stop is not engaged.
2. If the lift has not been used for 24 hours, enable the system.
3. Check that the HandControl IR is enabled.
4. Check that the charger cable is not connected to an electric outlet.
5. HandControl IR indicates battery change.
6. If the lift works via the operation panel, change the HandControl IR.
7. If the problem persists, please contact Liko/Hill-Rom.

The lift does not work up/down with the operation panel.
The base-width adjustment doesn't work (in/out) with the operation panel.

1. Make sure that the emergency stop is not engaged.
2. Make sure that the cables to the control box are connected correctly.
3. Check that the charger cable is not connected to an electric outlet.
4. Check the battery capacity.
5. Check that the battery's contact plates are not defective or broken.
6. *If the problem persists, please contact Liko/Hill-Rom.*

The charger doesn't work.

1. Make sure that the emergency stop is not engaged.
2. Check that the charging cable is correctly connected
3. Make sure that the battery is properly attached.
4. Check that the battery's contact plates are not defective or broken.
5. If the problem persists, please contact Liko/Hill-Rom.

The lift is stuck in the high position.

1. Make sure that the emergency stop is not engaged.
2. Check the battery capacity.
3. HandControl IR indicates battery change.
4. Use the electrical emergency lowering device to lower the patient onto a firm surface.
5. Use the manual emergency lowering device to lower the patient onto a firm surface.
6. *If the problem persists, please contact Liko/Hill-Rom.*

If you hear unusual sounds.

Contact Liko/Hill-Rom.

Trouble shooting

Viking M, Prod. No. 2040035

The lift doesn't work up/down with Hand Control.

The base-width adjustment doesn't work (in/out) with the Hand Control.

1. Check that the emergency stop button has not been pressed.
2. Check the battery capacity.
3. Check that the charger cable is not connected to an electric outlet.
4. Check that the hand control cable is correctly connected.
5. If the lift works via the operation panel, change the Hand Control.
6. *If the problem persists, please contact Liko/Hill-Rom.*

The lift does not work up/ down with the operation panel.

The base-width adjustment doesn't work (in/out) with the operation panel.

1. Check that the emergency stop button has not been pressed.
2. Check that the cables to the control box are connected correctly.
3. Check that the charger cable is not connected to an electric outlet.
4. Check the battery capacity.
5. *If the problem persists, please contact Liko/Hill-Rom.*

The charger doesn't work.

1. Check that the emergency stop button has not been pressed.
2. Check that the charger cables are connected correctly.
3. Make sure that the battery is properly attached.
4. *If the problem persists, please contact Liko/Hill-Rom.*

The lift is stuck in the high position.

1. Check that the emergency stop button has not been pressed.
2. Check the battery capacity.
3. Check that the hand control cable is connected correctly.
4. Electrical emergency lowering, use the operation panel to lower the patient onto a firm surface.
5. Use the mechanical emergency lowering device to lower the patient onto a firm surface.
6. *If the problem persists, please contact Liko/Hill-Rom.*

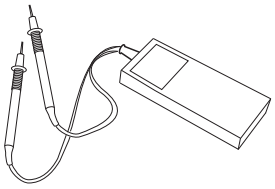
If you hear unusual sounds.

Contact Liko/Hill-Rom.

Trouble shooting

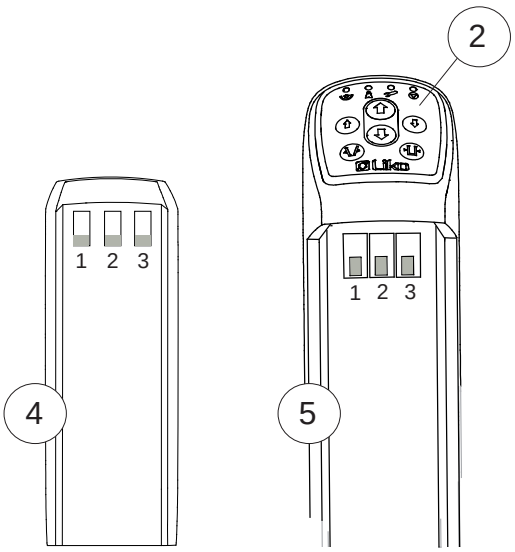
Control Unit CBL

Tools Required



Multimeter

Note! Begin with Simple trouble shooting from Service manual for the actual product. If problem remains continue as described below.



Check point:

1. Make sure that:
- the emergency stop (1) is not activated.
- the battery is assembled correctly.
- the charging cable is not connected to mains.

2. Check operation panel function´s for actuator and base motor

Push control buttons on operation panel (2) at control box

- If both actuator and base motor functions response, continue to step 5.
- If no function, continue to step 3.
- If only one of either the actuator or base motor function response: change position on actuator and base motor cables then check control function of operation panel, to see if fault is on output channels or the motors. If control box function is ok! Continue to step 5.
  If control box is faulty. **Replace the control box.**

3. Check battery capacity

3a) Push in the battery capacity button (3):
- If any of the three LED´s on the battery start´s the battery is OK, continue to step 4.
- If not, continue to step 3b.

3b) Measure battery voltage: release battery, (4) measure on contact 1 and 3:
- If voltage over 0V the battery is ok! Continue to step 4.

4. Verify contact between control box and battery.

4a) Remove the battery and wait for green LED to turn off.

4b) Put back the battery and see if green LED start automatically.
- If green LED starts, battery contact is ok!
- If not, try to ensure that the battery´s contact plates are not defective or broken and try to bend them out carefully, then repeat step 4.
- If still no contact, continue to step 5.

5. Check charging function

5a) Connect the charging cable to mains
- If charging starts within 1 minute, charge and then continue to step 6.
- If charging doesn´t start, continue to step 5b.

5b) Measure output voltage on the control box (5) on contact 1 and 3.
- If voltage is 3-4V charging is OK! **Replace the battery**, continue to step 6.
- If voltage is 0V when the charging cable is connected to mains the control box needs to be replaced! **Replace the control box**.

6. Charge the battery until green LED is flashing, on the battery.
- Check that all function´s on the control box is ok!
  If not , **Replace control box**.

Customers FAQ:

- The liftarms up/down function or base width in/out function doesn´t work?
a) Change position on actuator and base motor cables.
b) Perform step 2 and see if fault is on output channel or motors.

- The control panel function´s on controlbox is ok, but the hand control has no function?
a) Check to ensure that battery contact plates in the hand control are not defective or broken.

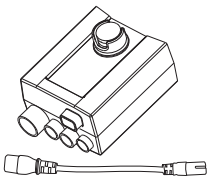
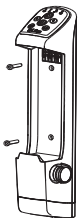
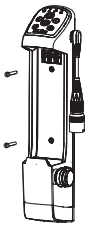
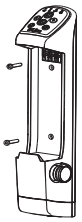
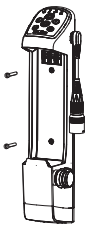
- There´s no charging function?
a) Verify contact between control box and battery. Perform step 4.
b) Check charging function. Perform step 5.

Spare parts

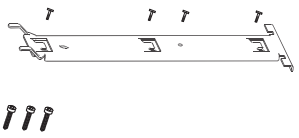
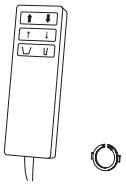
Viking M

△ There are two models of Viking M; Prod. No. 2040005 and 2040015.
Which spare part that fits to each model, can be read in the columns to the right. (x=fits with this model)

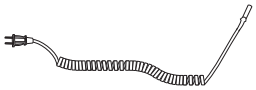
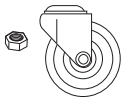
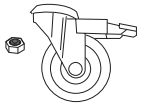
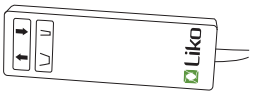
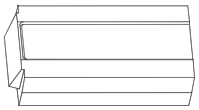
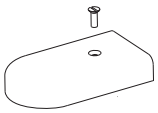
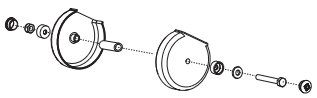
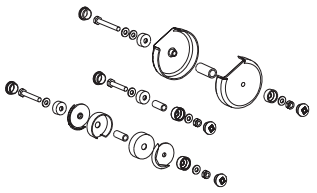
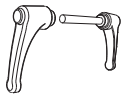
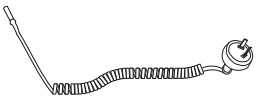
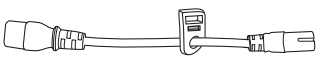
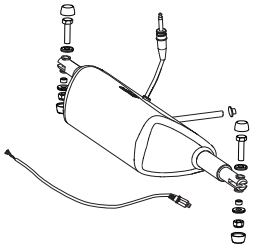
Viking M Control Units

PROD. NO.	POS. NO.	NAME	UNIT		2040005	2040015	2040035
20490013	268	Control box Viking M *S/N 7100101-7200200*	pce		x		
20490013US	268	Control box Viking M , US *S/N 7100101-7200200* *only for the US-market*			x		
20490032	334	Control Unit CBL, Viking M ***Before use; requires Software and, needs to be programmed with Liko Service System, Prod. No. 21090024***	pce			x	
20490053	334C	Control Unit CBL Viking M, Cable ***Before use; requires Software and, needs to be programmed with Liko Service System, Prod. No. 21090024***	pce				x
20490039	336	Control Unit CBL, by S/N ***Can only be ordered if S/N (serial number) can be provided to Liko Customer Service. Will be programmed at Liko before delivery.*** ***2 weeks delivery time from Liko.***	pce			x	
20490054	336C	Control Unit CBL by S/N, Cable ***Can only be ordered if S/N (serial number) can be provided to Liko Customer Service. Will be programmed at Liko before delivery.*** ***2 weeks delivery time from Liko.***	pce				x

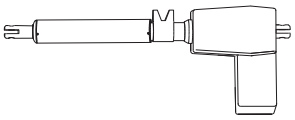
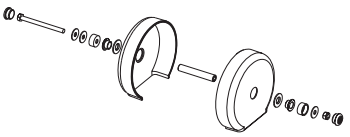
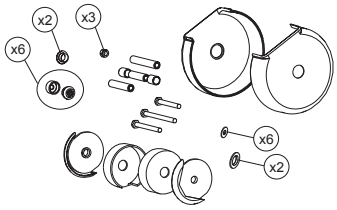
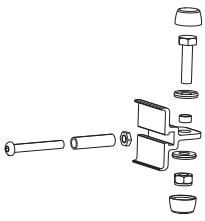
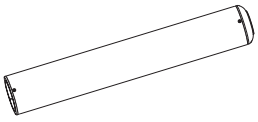
Viking M Spare Parts

20090023	19	Attachment for Control Box	pce		x		
20090089	20	Hand control 6-Button	pce				x

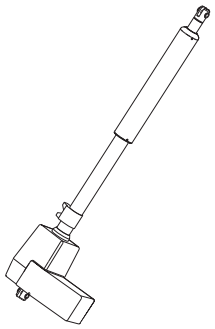
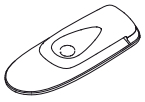
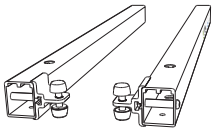
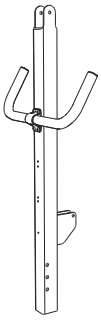
Spare parts

Viking M							
PROD. NO.	POS. NO.	NAME	UNIT		2040005	2040015	2040035
20090026 20090027 20090028	22 23 24	Cable for charging EU Cable for charging UK Cable for charging US	pce		x x x	x x x	x x x
20090034	29	Front wheel 75 mm *to S/N 7102063*	pce		x		
20090035	30	Rear wheel 100 mm *to S/N 7102063*	pce		x		
20190017	55	Hand control EE 4 buttons	pce		x		
2006106	139	Extra Battery	pce		x		
20390006	159	Front Fork Cover	pair		x	x	x
21090001	160	Extension cable	pce		x		
20490005	194	Rear fork cover *to S/N 7102063*	pair		x		
20490007	196	Lift Arm Plastic Cover *to S/N 7106200*	set		x		
20490008	197	Restoration set Overhead beam *to S/N 7106200*	set		x		
20490010	199	Locking handle Viking XL	pair		x	x	x
20090050	248	Cable for charging AU/NZ	pce		x	x	x
21090011	263	Extension Cable US	pce		x		
31590011	264	Latch Universal SlingBar	pair		x		
20490011	266	Base Motor Viking M, L (Viking M 2040005 up to S/N 7107499 also need spare part 20490028, Pos 328)	pce		x	x	x

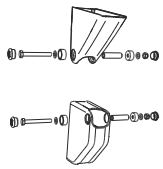
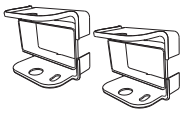
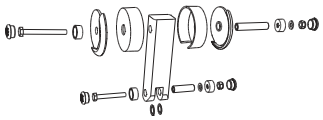
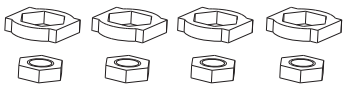
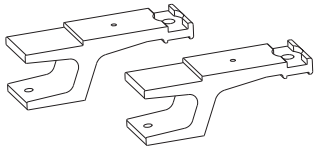
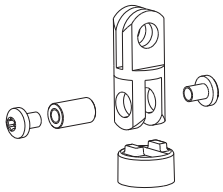
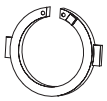
Spare parts

Viking M							
PROD. NO.	POS. NO.	NAME	UNIT		2040005	2040015	2040035
20490012	267	Actuator Viking M *S/N 7100101-7200200*	pce		x		
20490014	284	Front Wheel 75 mm Standard *from S/N 7102064*	pce		x	x	x
20490015	285	Rear Wheel 75 mm Standard *from S/N 7102064*	pce		x	x	x
20090058	292	Hook for Hand control	pce		x		x
20490023	307	Lift Arm Plastic Cover *from S/N 7106201*	set		x	x	x
20490024	308	Overhead Beam Rest. set *from S/N 7106201*	set		x	x	x
31590014	311	Latch, composite *Fits Universal SlingBar* *from S/N 1299511*	pair		x	x	x
20490028	328	Restoration set motor attach-ment	set		x	x	x
20490030	331	Outer Tube	set		x	x	x
20490031	333	Wireless hand control HBL20	set			x	

Spare parts

Viking M							
PROD. NO.	POS. NO.	NAME	UNIT		2040005	2040015	2040035
20490033	347	Actuator Vi M *S/N 7500401 - 7600500*	pce			x	x
21090018	348	Extension cable CBL20	pce			x	x
21090019	349	Extension cable CBL 20 US,	pce			x	x
2006107	350	Extra battery box	pce			x	x
21090020	351	Beltclip HBL20	pair			x	
21090021	352	Clips with hook HBL20	pair			x	
21090022	353	Charge cable hook , 10 pce	set			x	x
21090023	354	Hand control hanger, 10 pce	set			x	
20490036	410	Viking M Legs *from S/N 7100308*	pair		x	x	x
20490038	418	Mast Viking M *including handle and motor attachment*	set		x	x	x
20090077	422	Locking device CBL20, 10 pce	set			x	x

Spare parts

Viking M							
PROD. NO.	POS. NO.	NAME	UNIT		2040005	2040015	2040035
20490040	439	Bracket Cover	set		x	x	x
20490048	460	Leg Cover M	set		x	x	x
20490049	461	Flexlink	set		x	x	x
20090080	485	Fork locking attachment, 4 pair	set		x	x	x
20090081	486	Wheel Fork	pair		x	x	x
20490052	490	SlingBar Assembly set	set		x	x	x
20490057	511	Locking Ring CBL, 10 pce	set				x

5.19

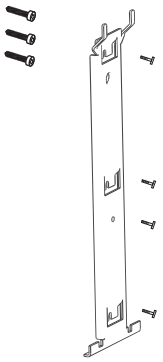
Attachment for Control Box
Monteringsbeslag kontrollbox

Assembly Instruction
Monteringsanvisning

Prod. No. 20090023

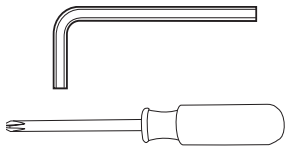
3SE630238-05
2011-02-08

Contains:	**Qty:**
Screw MRT-GF M5x16	3
Screw MCL6S M5x8	4
Control box attachment	1



Fits:
Golvo 7000ES/7007ES, 7007 LowBase
Uno 100 EM/EE
Uno 102 EM/EE/ES
Sabina EM/EE
Sabina II EM/EE
Viking XL (Prod. No. 2040003)
Viking L (Prod. No. 2040004)
Viking M (Prod. No. 2040005)
Liko M220 / M230

Tools required:



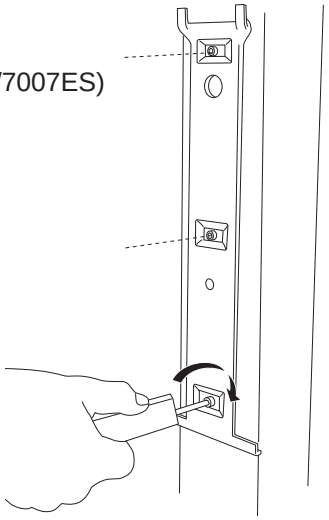
3 mm

T25

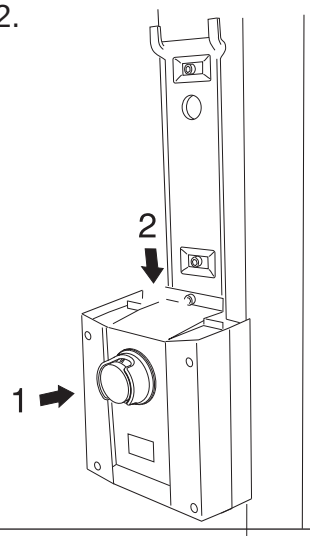
1.

x 3 (Viking M, L, XL, Golvo 7000ES/7007ES)

x 3 (Sabina, Uno, Liko M220/M230)

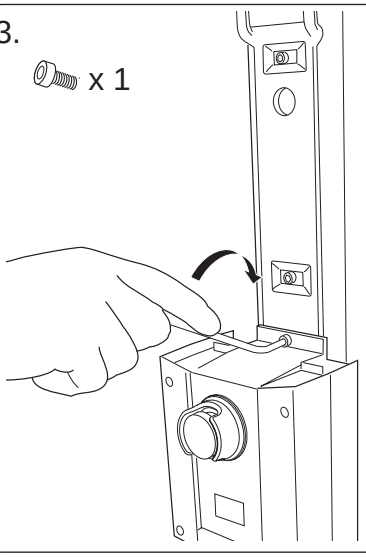


2.

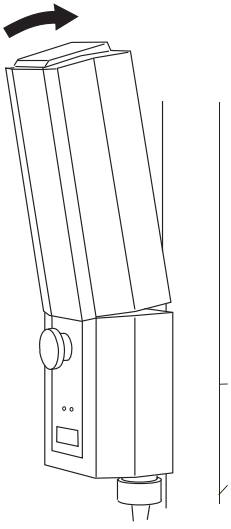


3.

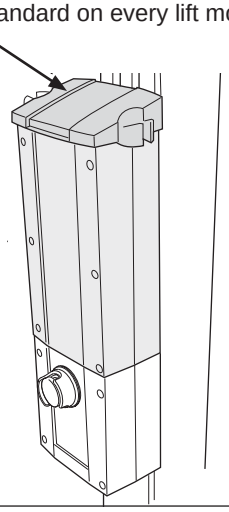
x 1



4.



5. (Holder for the charging cable, is not standard on every lift model)



⚠ NOTE

- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko/Hill-Rom and using original Liko spare parts.

5.20

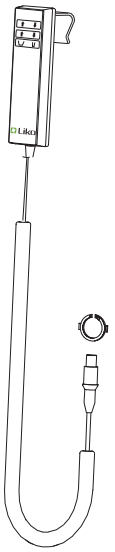
Hand Control ES 6-Button
Handkontroll ES 6-knappar

Assembly Instruction
Monteringsanvisning

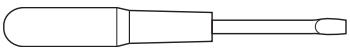
Prod. No. 20090089

3SE690232-02
2013-01-17

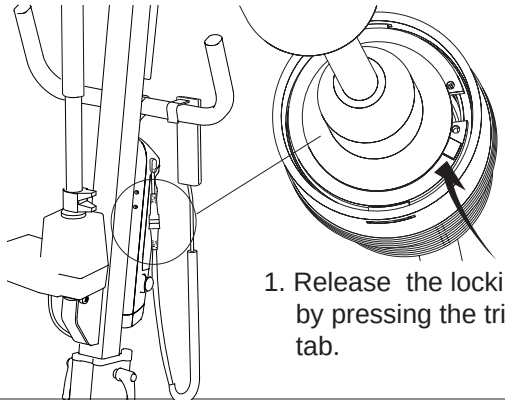
Contains:	**Qty:**
Hand control ES	1
Locking Ring	1



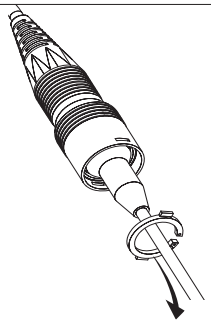
Tools required



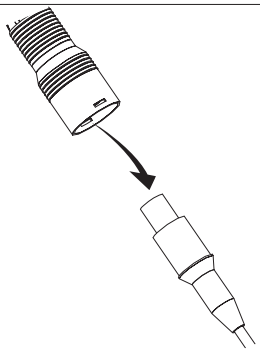
Product:	**Prod. No.**
Viking XL	2040033
Viking L	2040034
Viking M	2040035
Golvo 8000	2000034
Golvo 8008	2000035
Golvo 8008 LowBase	2000039



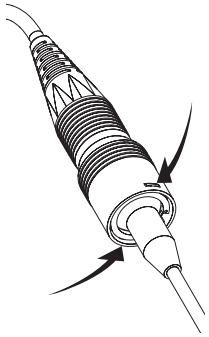
1. Release the locking ring by pressing the triangular tab.



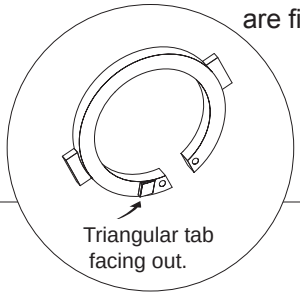
2. Remove the locking ring.



3. Remove the hand control. Assemble in reverse order.



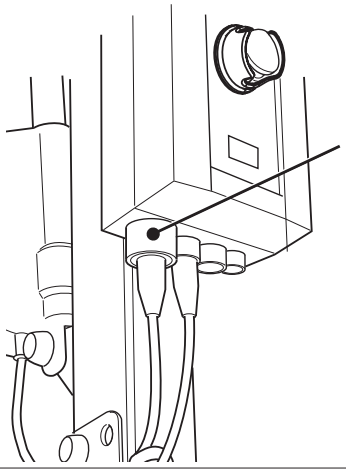
4. Make sure the rectangular tabs at the locking ring are fixed.



Triangular tab facing out.

Product:
Golvo 7000ES/7007ES
Golvo 7007 LowBase
Uno 102 ES
Sabina EE
Sabina II EE

Use no locking ring on these products.



Connect cable

⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

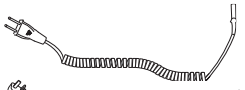
5.22
Cable for Charging
Laddningskabel

Assembly Instruction
Monteringsanvisning

Contains:	**Qty:**
Charging cable	1

Fits:
Golvo 7000ES / 7007ES / 7007 LowBase
Golvo 8000 / 8008 / 8008 LowBase
Uno 100 EM/EE
Uno 102 EM/EE/ES
Sabina EM/EE
Sabina II EM/EE
Viking XL
Viking L
Viking M

Prod. No. 20090026 EU

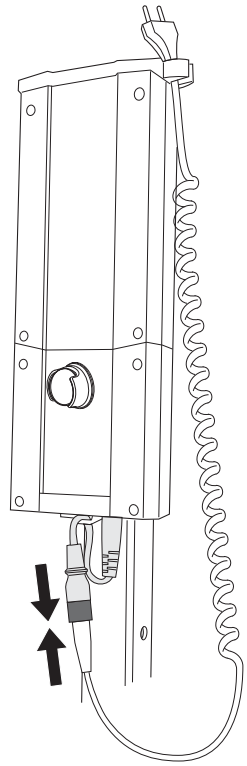


20090027 UK

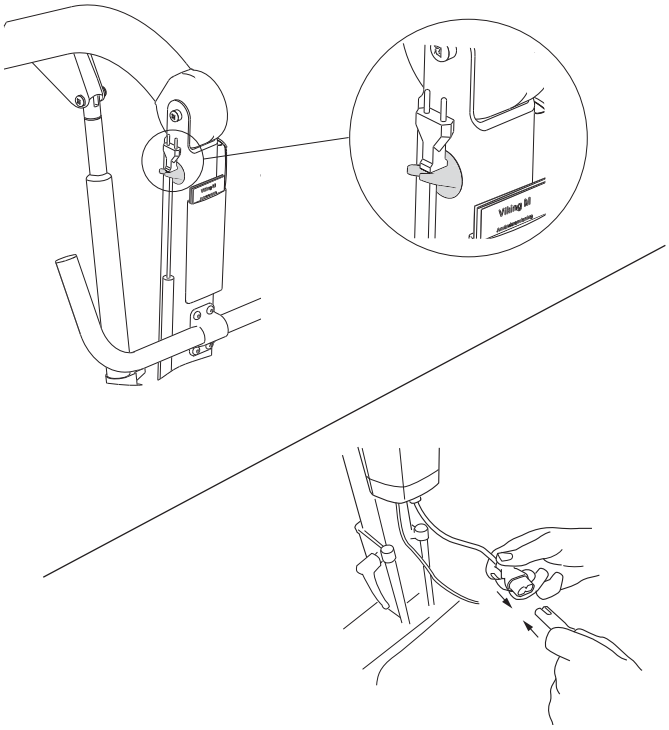
20090028 US

20090050 AU/NZ

3SE630237-06
2012-09-11



Lift equipped with Liko Diagnostic System™



The lift cannot be used when the charger cable is plugged into an electrical outlet.

△ NOTE

- Never charge batteries in a wet area.
- The lift cannot be charged with the emergency stop engaged.
- When charging, a yellow indicator light on the control box will illuminate. The yellow light turns off when the battery is fully charged. If the light has not turned off after 8 hours of charging, the battery may need to be replaced. Stop charging and replace the battery.
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko/Hill-Rom and using original Liko spare parts.

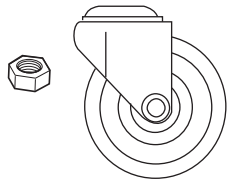
5.29
Front Wheel 75 mm
Framhjul 75 mm

Assembly Instruction
Monteringsanvisning

Prod. No. 20090034

3SE640273-02
2010-04-21

Contains:	**Qty:**
Front wheel 75mm	1
Locking nut M10 nyloc	1

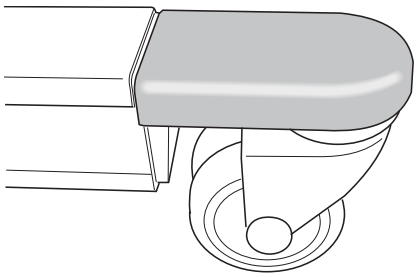


Fits:
Golvo 1000, 2000, 3000
Golvo 7000/7007, 7000 S/7007 S
Golvo 7000 ES, to S/N 7024205
Golvo 7007 ES, to S/N 7729721
Viking M Prod. No. 2040005, to S/N 7102063

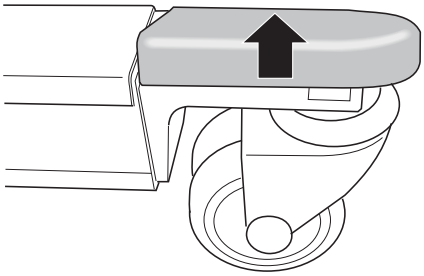
Tools required:

17 mm

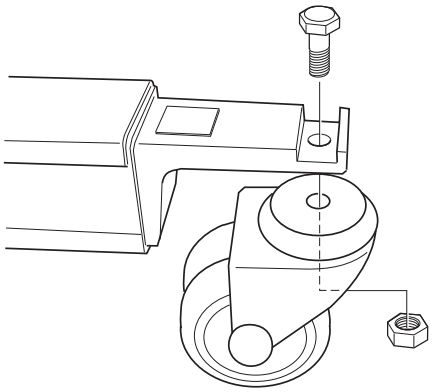
1.



2.



3.



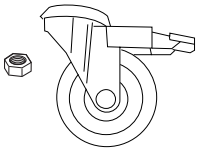
⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko/Hill-Rom and using original Liko spare parts.

Assembly Instruction
Monteringsanvisning

Prod. No. 20090035

3SE650201-04
2012-11-09

Contains:	**Qty:**
Lockable castor, d=100 mm	1
Nut M12	1

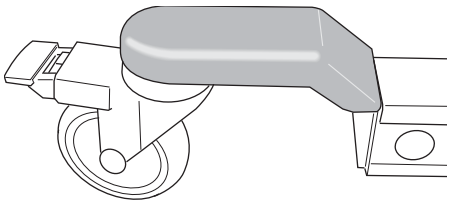


Fits:
Golvo 1000, 2000, 3000
Golvo 7000/7007, 7000 S/7007 S
Golvo 7000/7007
Golvo 7000 ES, to S/N 7024205
Golvo 7007 ES, to S/N 7729721
Viking M, Prod. No. 2040005, to S/N 7102063

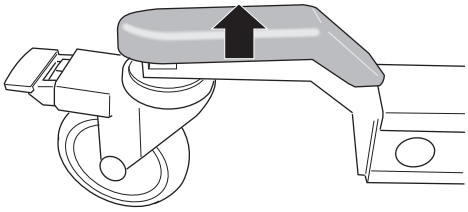
Tools required:

19 mm

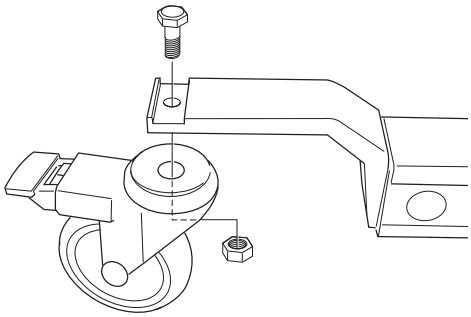
1.



2.



3.



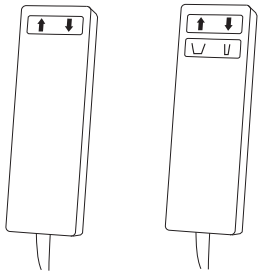
⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

Liko
A Hill-Rom Company

Hand Control 2, 4-button
Handkontroll 2, 4-knapp

Assembly Instruction
Monteringsanvisning

Prod. No. 20190016, 20190017



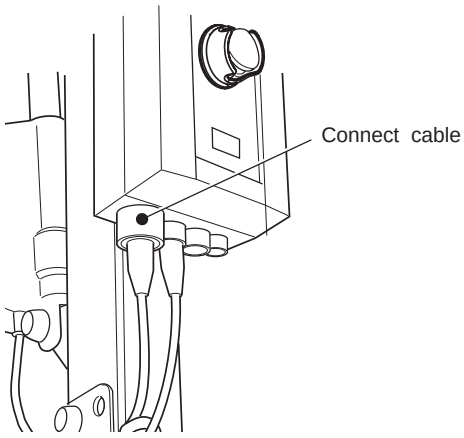
3SE630204-11
2012-09-11

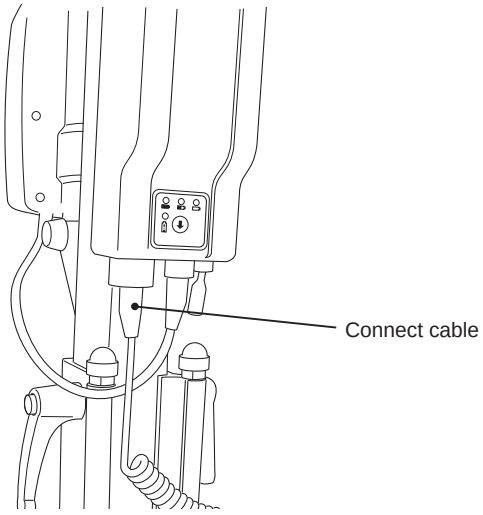
20190016 Contains:	**Qty:**
Hand control EM 2-Button	1

20190017 Contains:	**Qty:**
Hand Control EE 4-Button	1

20190016 Hand control EM 2-Button, Fits:
LikoLight
Sabina EM
Sabina II EM
Uno 100 EM
Uno 102 EM
Viking S
Viking XS

20190017 Hand control EE 4-Button, Fits:
Uno 100 EE
Uno 102 EE
Viking XL Prod. No. 2040003
Viking L Prod. No. 2040004
Viking M Prod. No. 2040005





NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.139

Extra Battery Box, incl Batteries
Batteribox inkl batterier

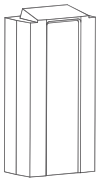
Assembly Instruction
Monteringsanvisning

Prod. No. 2006106

3SE630224-06
2011-02-24

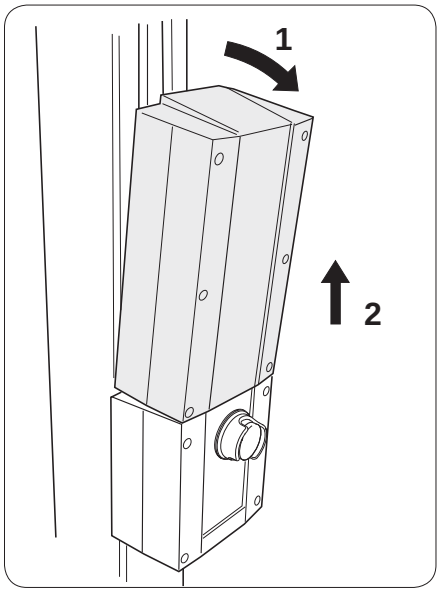
Contains:
Battery box

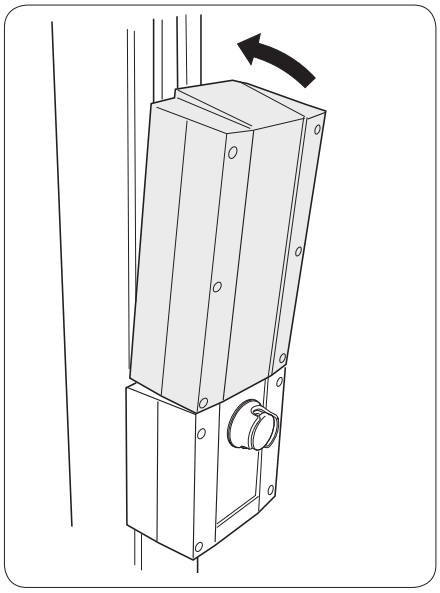
Qty:
1

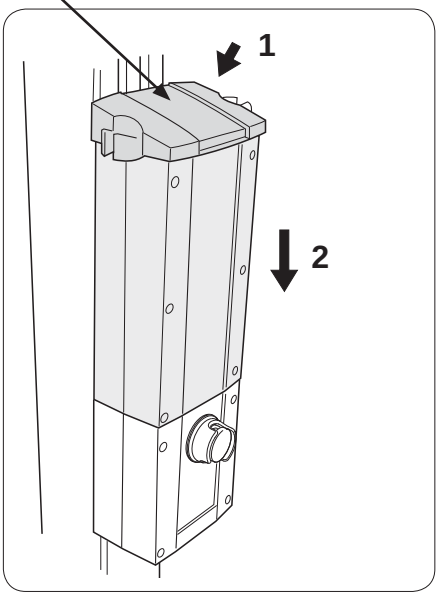


Fits:
Caroli
Capella
Golvo 7000 ES/7007 ES (all models), 7007 Low Base
LikoLight
Liko M220 / M230
Sabina
Uno 100EM,EE,102EM,EE,ES
Viking XL (Prod. No. 2040003)
Viking L (Prod. No. 2040004)
Viking M (Prod. No. 2040005)

(Holder for the charging cable, is not standard on every lift model)







⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko/Hill-Rom and using original Liko spare parts.
- Old batteries are to be left at the nearest recycling station or given to personnel authorized by Liko.

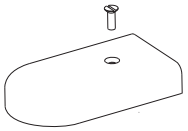
5.159
Front Fork Cover LL,Vi, Golvo
Framhjulskåpa LL,Vi, Golvo

Assembly Instruction
Monteringsanvisning

Prod. No. 20390006

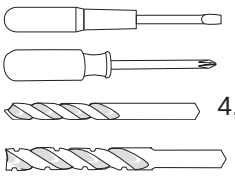
3SE380202-04
2010-05-04

Contains:	**Qty:**
Nylon screw M5x16 Nature	2
Front fork cover grey light	2

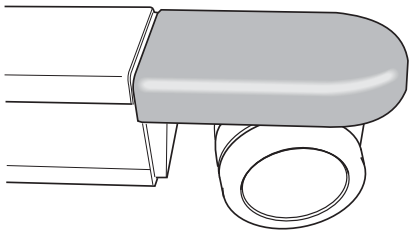


Fits:
Golvo 7000 ES from S/N 7024206
Golvo 7007 ES from S/N 7729722
Golvo 7000 ES Classic / 7007 ES Classic
Golvo 8000 / 8008 (all models)
LikoLight
Viking XL
Viking L
Viking M
Viking S
Viking XS
Roll On

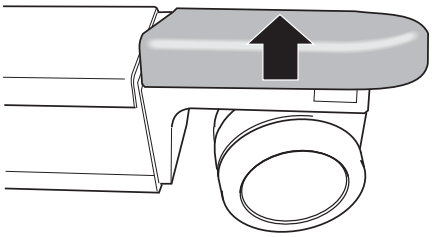
Tools required:



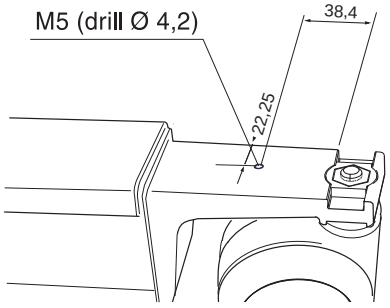
1.



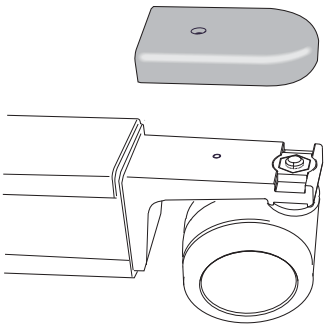
2.



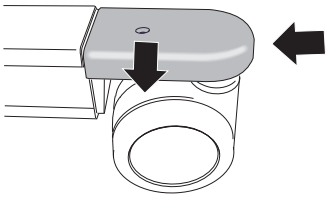
3. If not prepared with hole, drill [mm.]



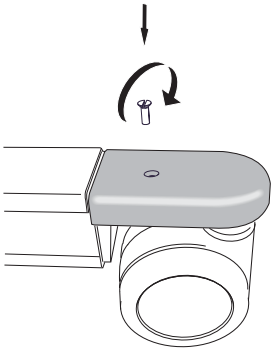
4.



5.



6.



⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.160
Extension Cable
Skarvkabel

Assembly Instruction
Monteringsanvisning

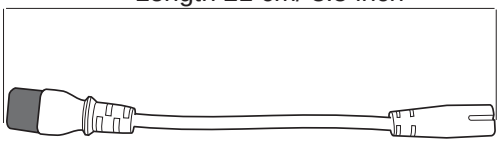
Prod. No. 21090001

3SE630225-05
2011-03-02

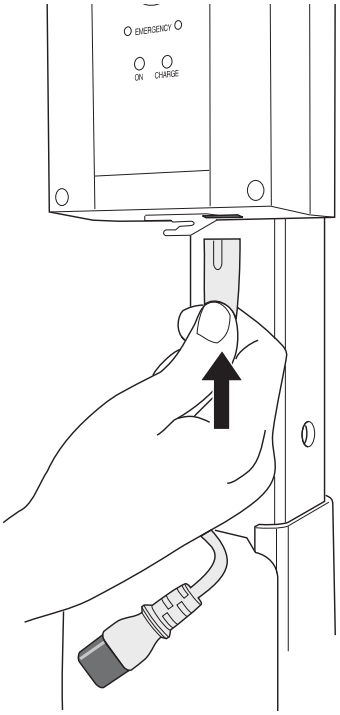
Contains:	**Qty:**
Extension cable EU	1

Fits:
Golvo 7000ES/7007ES
Golvo 7007 LowBase
Uno 100 EM/EE
Uno 102 EM/EE/ES
Sabina EM/EE
Sabina II EM/EE
Viking XL (Prod. No. 2040003)
Viking L (Prod. No. 2040004)
Viking M (Prod. No. 2040005)

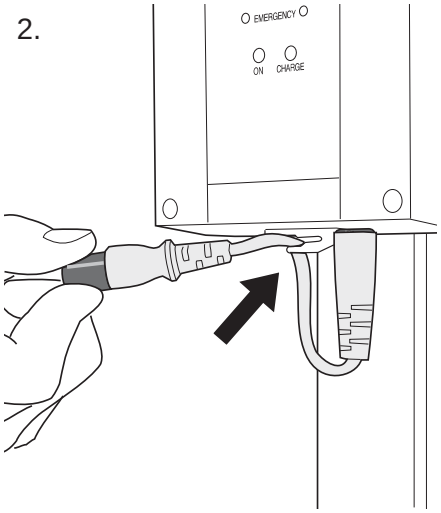
Length 21 cm/ 8.5 inch



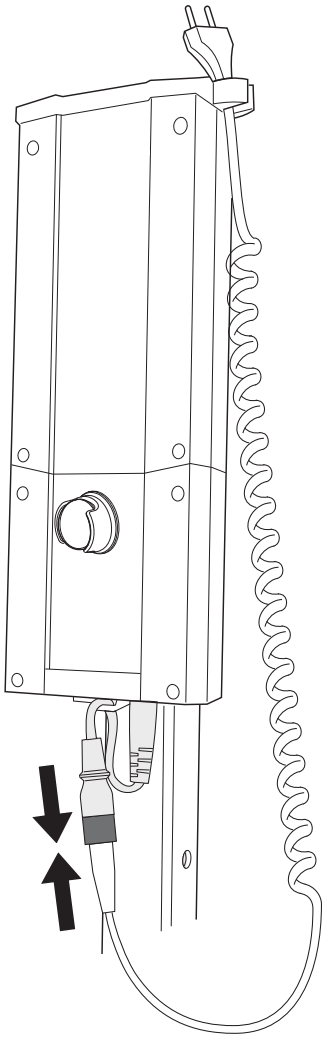
1.



2.



3.



⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko/Hill-Rom and using original Liko spare parts.

5.194
Rear fork cover
Bakhjulskåpa

Assembly Instruction
Monteringsanvisning

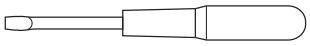
Prod. No. 20490005

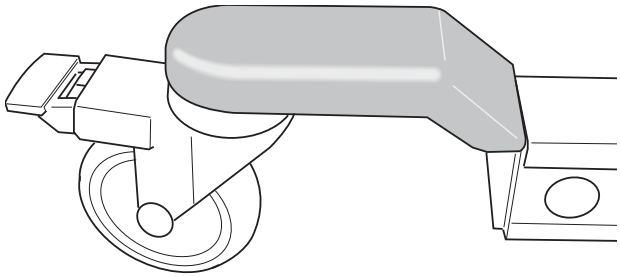
3SE630295-03
2010-04-14

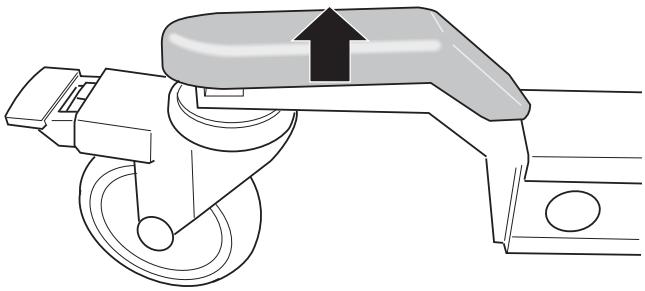
Contains: **Qty:**
Rear wheel cover, grey 2

Fits:
Viking XL
Viking L
Viking M, Prod No. 2040005 (Up to S/N 7102063)

Tools required:







⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko and using original Liko spare parts.

5.196
Lift Arm Plastic Cover
Pelarkåpa sats

Assembly Instruction
Monteringsanvisning

Prod. No. 20490007

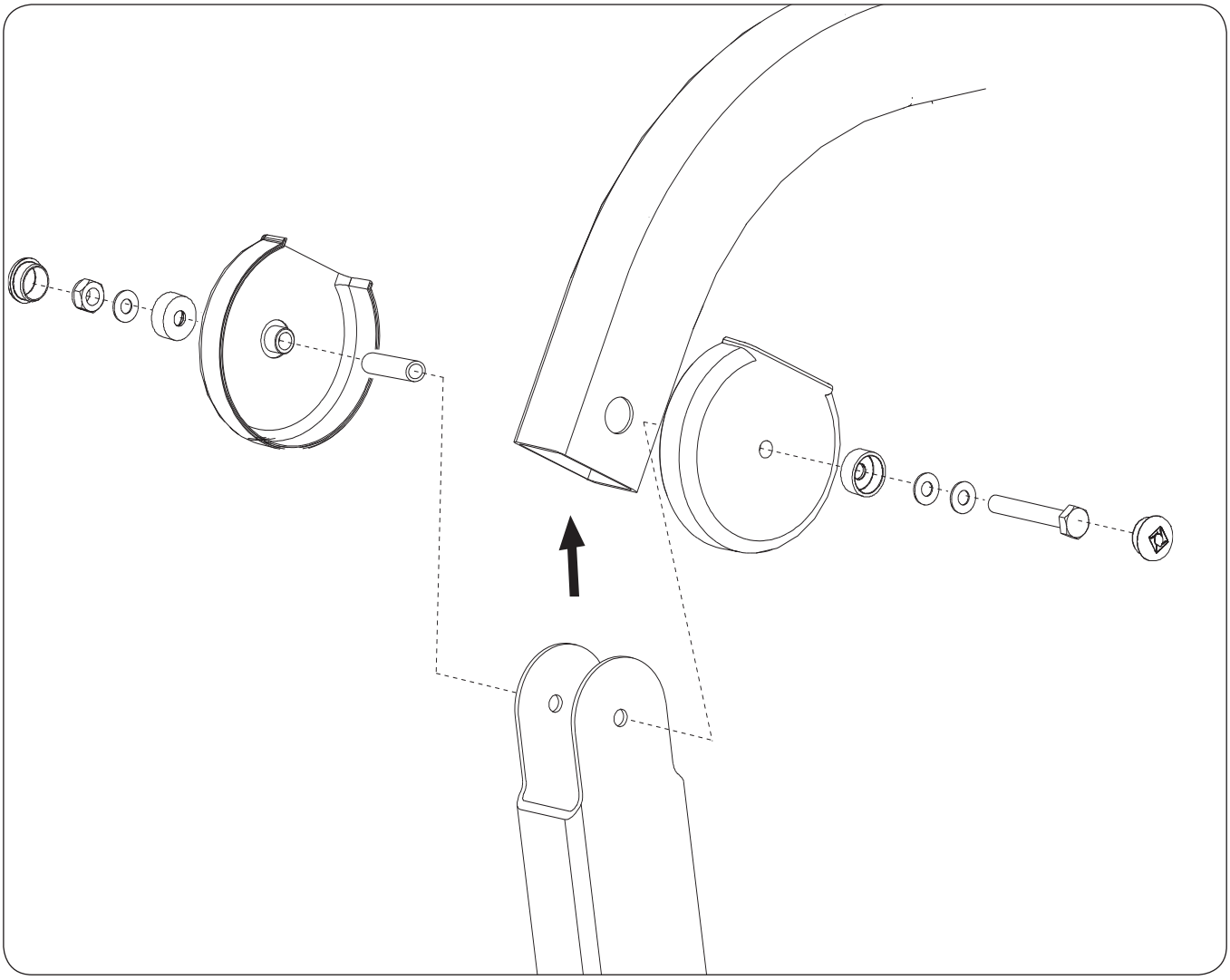
3SE630240-05
2011-03-11

Contains:	**Qty:**
Plastic cover mast Viking	2
Cover hat Liko	2
Cover hat Liko bottom	2
Sleeve bearing Mob.62	1
Locking nut M6 Nyloc	1
Washer TBRB 6,4x12x3	3
Screw M6S M6x75	1

Fits:
Viking XL (Prod. No. 2040003), to S/N 801999
Viking L (Prod. No. 2040004), to S/N 7200794
Viking M (Prod. No. 2040005), to S/N 7106200

Tools required:

2X 10 mm



⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko/Hill-Rom and using original Liko spare parts.

Overhead Beam Restoration set
Renoveringssats lyftarm

Assembly Instruction
Monteringsanvisning

Prod. No. 20490008

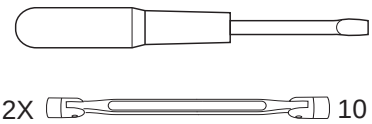
3SE630228-06
2011-03-03

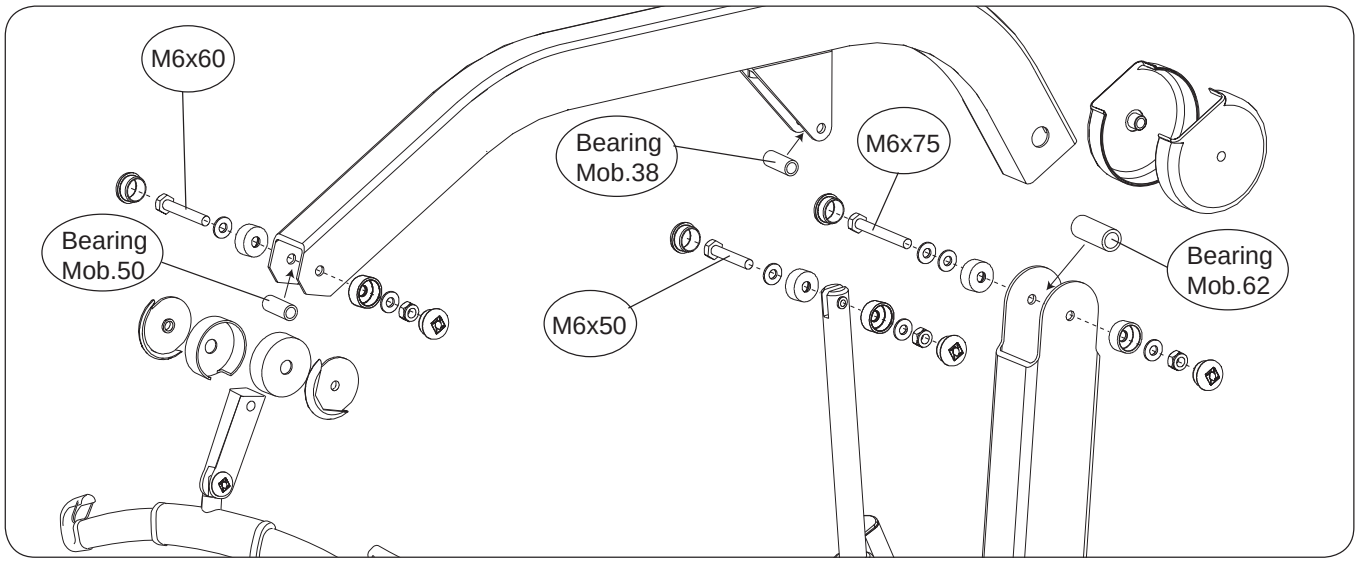
Contains: **Qty:**

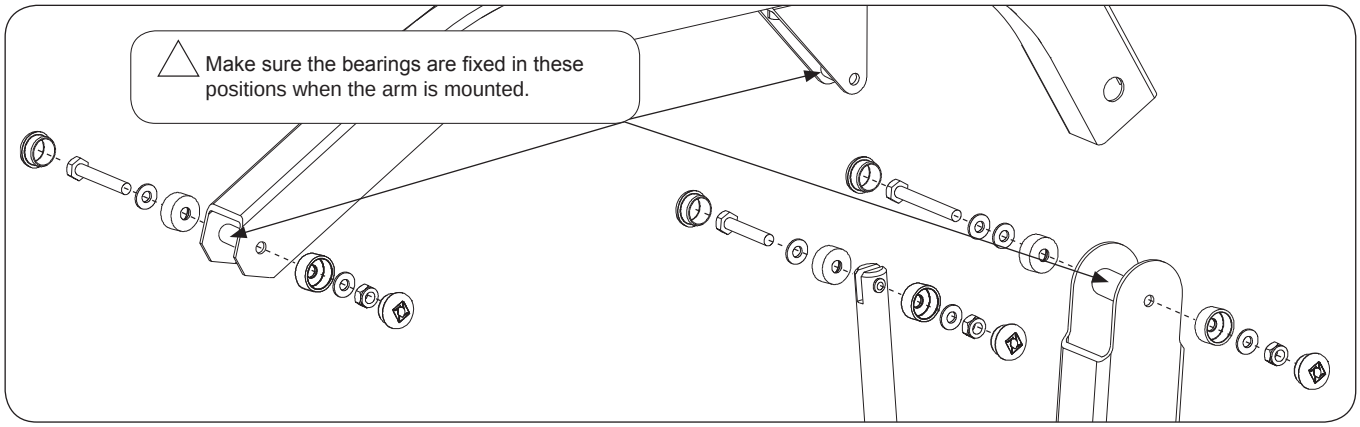
Plastic cover mast Viking	2
Cap Y Viking	2
Cap I Viking	2
Cover hat Liko & bottom	6
Sleeve bearing Mob.38	1
Sleeve bearing Mob.50	1
Sleeve bearing Mob.62	1
Locking nut M6 Nyloc	3
Screw M6S M6x50	1
Screw M6S M6x60	1
Screw M6S M6x75	1
Washer PS 6x12x1	7

Fits:
Viking XL (Prod. No. 2040003), to S/N 801999
Viking L (Prod. No. 2040004), to S/N 7200794
Viking M (Prod. No. 2040005), to S/N 7106200

Tools required:







NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko/Hill-Rom and using original Liko spare parts.

5.199

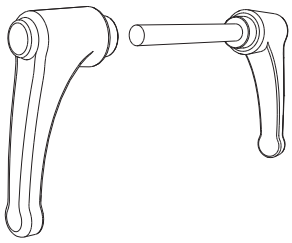
Locking Handle Viking XL
Låsvred Viking XL

Assembly Instruction
Monteringsanvisning

Prod. No. 20490010

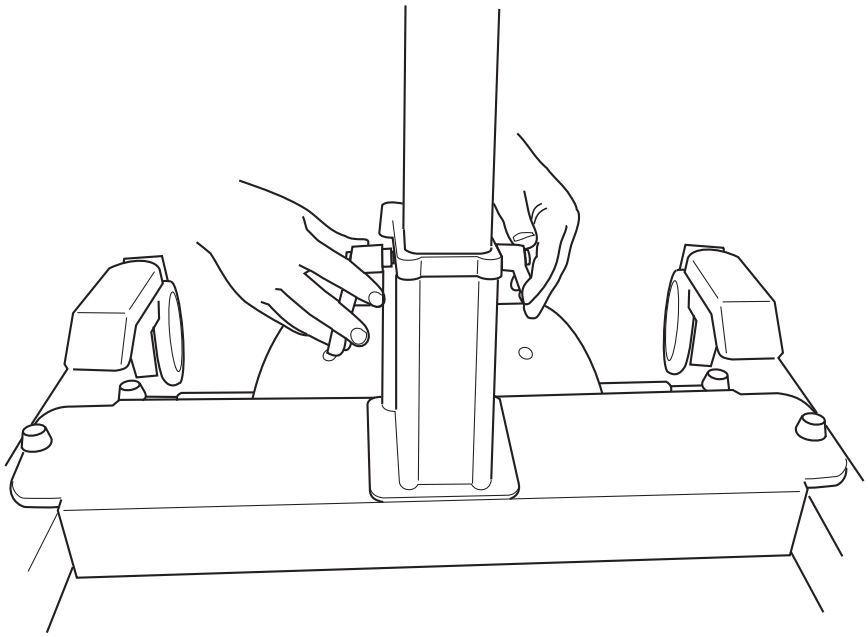
3SE630244-03
2009-06-26

Contains:	**Qty:**
Lever M10 grey	1
Lever M10x85 grey	1



Fits:
Viking XL
Viking L
Viking M
Viking XS

Tools required:



Place locking handle in lower hole and tighten.

⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko/Hill-Rom and using original Liko spare parts.

5.263

Extension Cable, US
Skarvkabel, US

Assembly Instruction
Monteringsanvisning

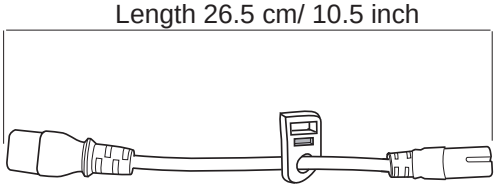
Prod. No. 21090011

3SE630218-06
2011-05-02

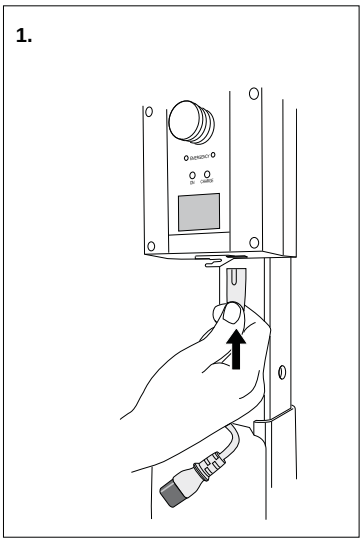
Contains: **Qty:**
Extension cable US 1

Fits:
Golvo 7000ES/7007ES
Golvo 7007 LowBase
Uno 100 EM/EE
Uno 102 EM/EE/ES
Sabina EM/EE
Sabina II EM/EE
Viking XL Prod. No. 2040003
Viking L Prod. No. 2040004
Viking M Prod. No. 2040005

Length 26.5 cm/ 10.5 inch



1.



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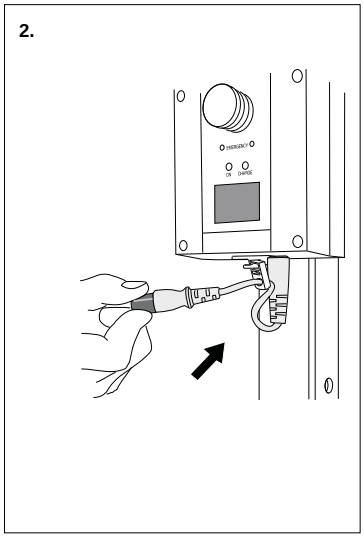

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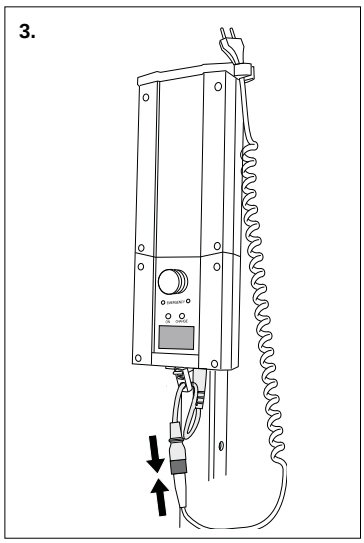


NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko/Hill-Rom and using original Liko spare parts.

5.264

Latch Universal Slingbar
Urkrokningsskydd Universalbygel

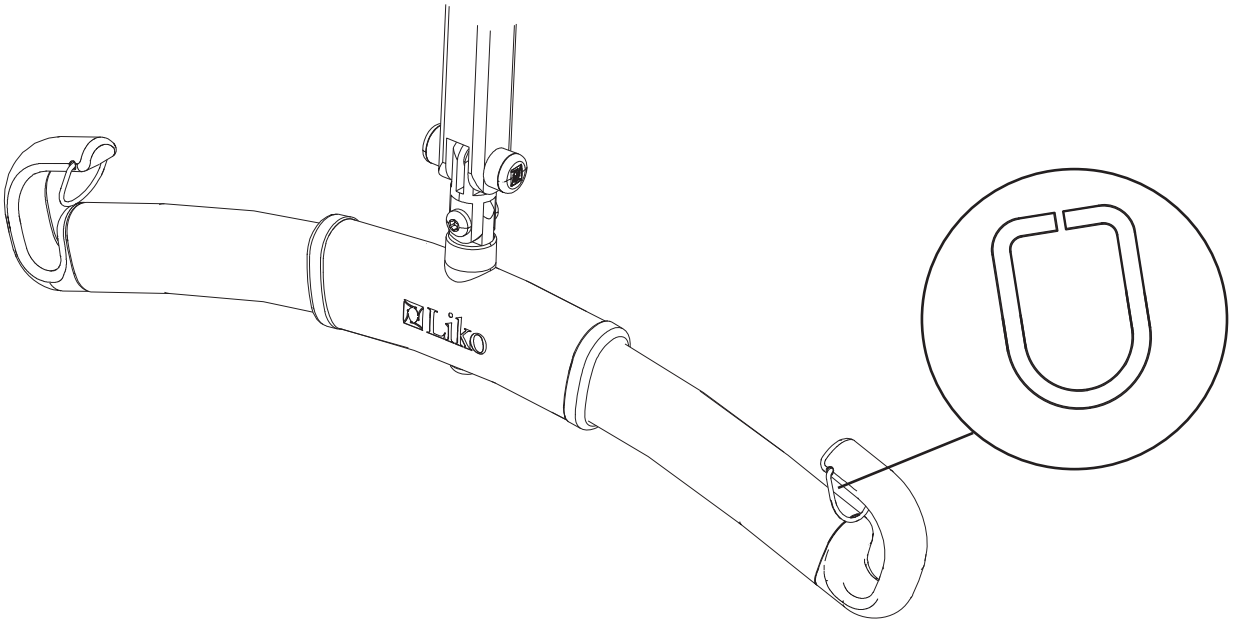
Assembly Instruction
Monteringsanvisning

Prod. No. 31590011

3SE630229-04
2011-05-25

Contains:	Qty:
Latch	2

Fits:
3156074 Universal SlingBar 350
3156075 Universal SlingBar 450
3156076 Universal SlingBar 600
3156077 Universal TwinBar 670
3156079 Universal SideBars 450
3156084 Universal SlingBar 350 with Quick-release Hook
3156085 Universal SlingBar 450 with Quick-release Hook
3156086 Universal SlingBar 600 with Quick-release Hook
3156087 Universal TwinBar 670 with Quick-release Hook
3156094 Universal SlingBar 350 R2R
3156095 Universal SlingBar 450 R2R



⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

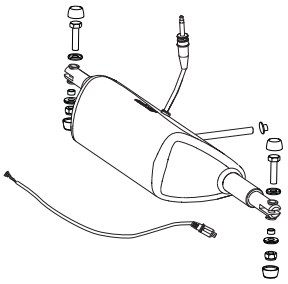
Base Motor Viking M / L
Benbreddningsmotor Viking M / L

Assembly Instruction
Monteringsanvisning

Prod No. 20490011

3SE630296-08
2012-12-17

Contains:		**Qty:**
Actuator LA30 Viking L/M complete		1
Motor cable Viking M Mini Fit		1
Pos:		
A	Slide bearing 10/12x6	2
B	Nylon bearing with collar	2
C	Cover Hat	4
D	Screw M10x40	2
E	Locking Nut M10	2

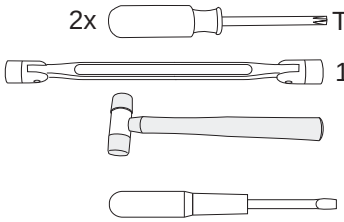


Fits:

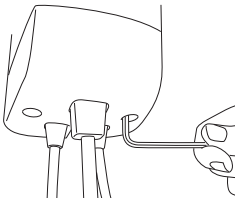
Viking M	2040005, from S/N 7107500*
Viking M	2040015
Viking M	2040035
Viking L	2040004, from S/N 7202000*
Viking L	2040014
Viking L	2040034

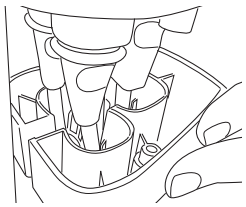
**Fits Viking M/L with lower S/N, together with spare part 20490028; Rest. set Motor attachment.*

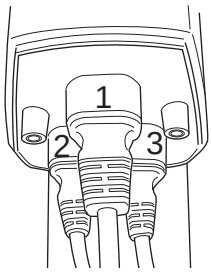
Tools required:



Viking M 2040015 + 2040035
Viking L 2040014 + 2040034:





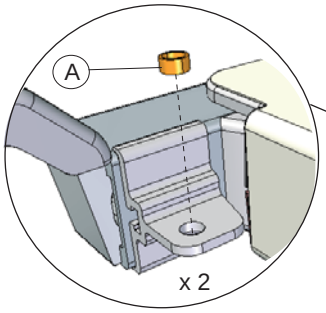


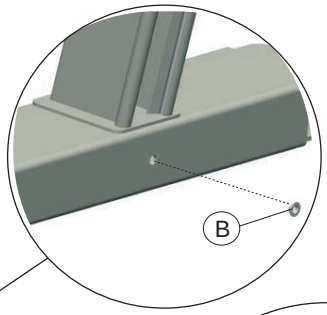
- Base motor cable; socket 3

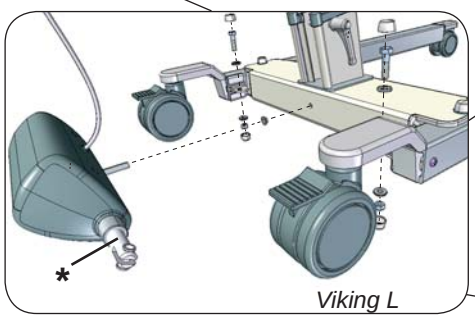
Viking M 2040015 + 2040035
Viking L 2040014 + 2040034:

Assemble the enclosed motor cable.

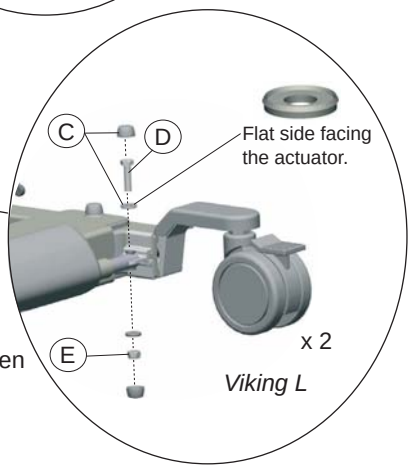
Assembly of cable, see next page.







Viking L



Viking L

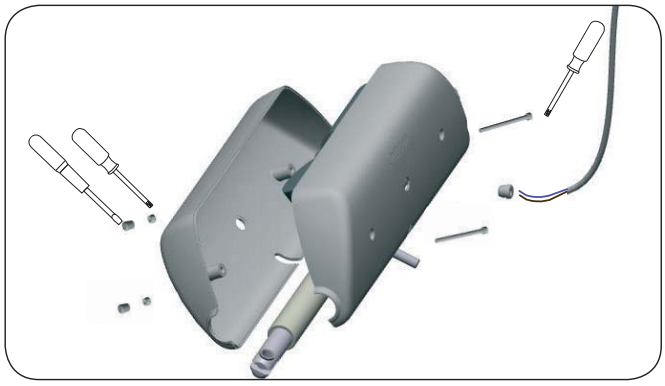
- Unfasten the base motor by removing the bolt connections.
- Attach the slide bearings (A)
- Fasten the Nylon bearing with collar (B)
- Change the Base motor by pushing the motor axle in to the middle beam hole.
  Before mounting the Base Motor, unscrew the piston rods* to its end position and then back until it fits in the brackets at the legs in closed position.
- Finish the assembly by mounting the bolt connections, assemble the cable and attach the cable cover.

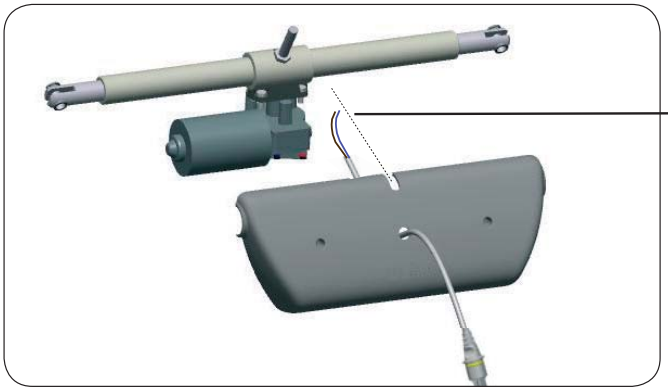
Assembly Instruction
Monteringsanvisning

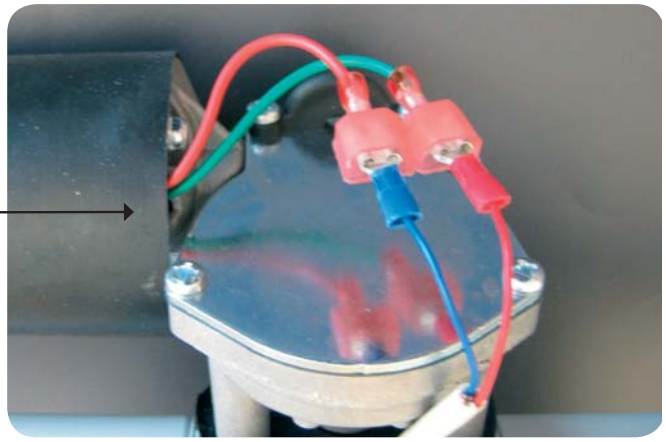
Prod No. 20490011

Assembly of cable for:

	Prod No:
Viking M	2040015 and 2040035
Viking L	2040014 and 2040034



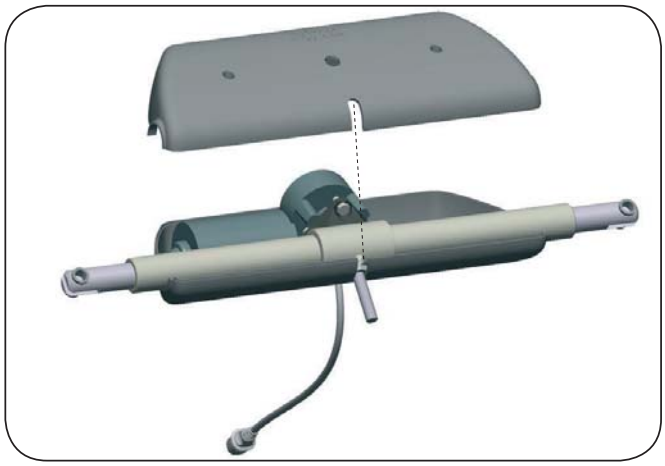


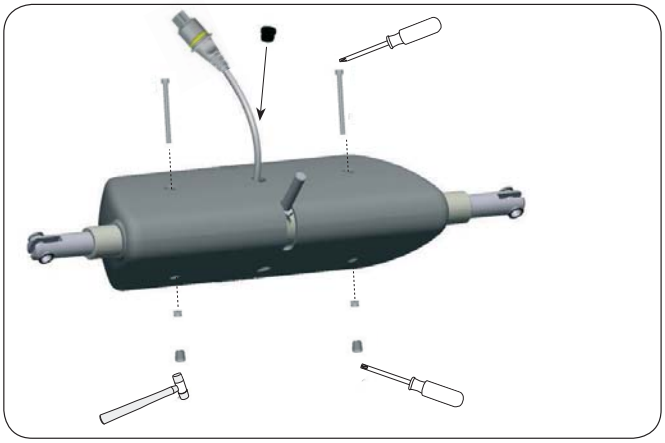


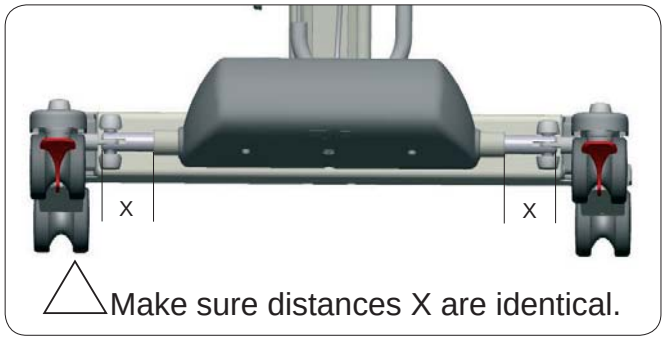
Cable connection:

Red ■ **Green** ■

Blue ■ **Red** ■







△ Make sure distances X are identical.

△ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.267
Actuator Viking M
Ställdon Viking M

Assembly Instruction
Monteringsanvisning

Prod. No. 20490012

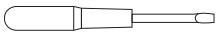
3SE630297-04
2010-08-02

Contains:

Actuator Viking M	1
Outer Tube	1
Locking nut M10 Nyloc	2
Locking nut M6 Nyloc	2

Fits:
Viking M (2040005)

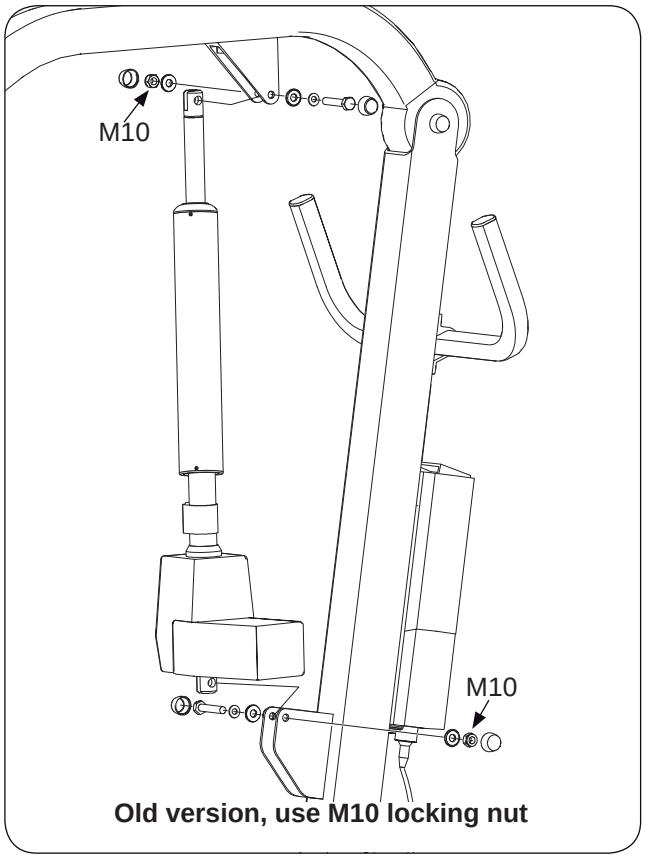
Tools required:



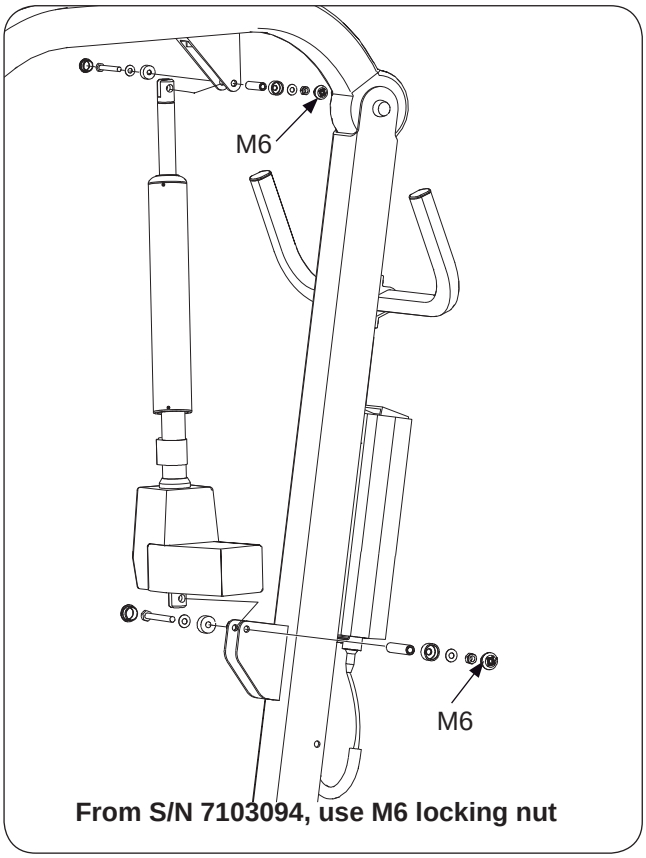
2X 10mm

or

2X 17 mm



Old version, use M10 locking nut



From S/N 7103094, use M6 locking nut

⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko and using original Liko spare parts.

5.268
Control Box
Kontrollbox

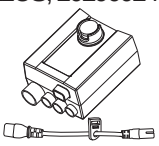
Assembly Instruction
Monteringsanvisning

For the North American market

Spare Part No: 3SE630223-10

20090022US, 20190014US, 20190076US, 20290011US, 20290024US, 20390007*, 20490009US, 20490013US 2012-08-09

Contains:	**Qty:**
Control Box	1
Extension cable, US	1

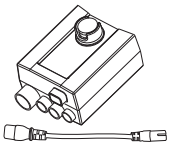


For other markets:

Spare Part No:

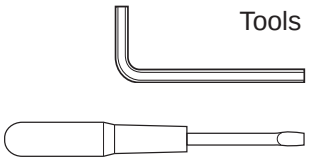
20090022, 20190014, 20190076, 20290011, 20290024, 20390007*, 20490009, 20490013

Contains:	**Qty:**
Control Box	1
Extension cable	1



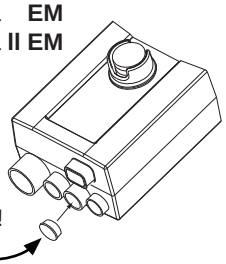
Tools required:

3 mm

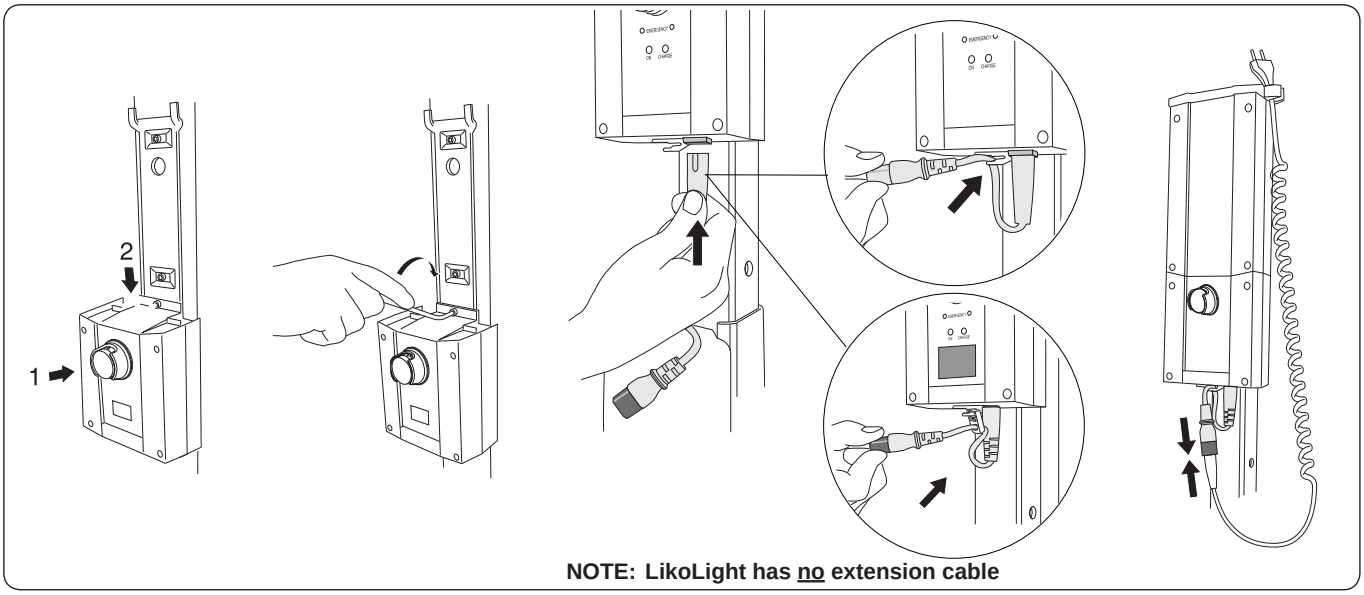


Part No.	**Fits:**
20090022, 20090022US	Golvo 7000ES / 7007ES, 7007 LowBase
20190014, 20190014US	Uno 102 ES
20190076, 20190076US	Uno 100 EM/EE Uno 102 EM/EE
20290011, 20290011US	Sabina EM/EE
20290024, 20290024US	Sabina II EM/EE
20390007	LikoLight **(*Spare part without extension cable)**
20490009, 20490009US	Viking XL (Prod. No. 2040003) Viking L (Prod. No. 2040004)
20490013, 20490013US	Viking M (Prod. No. 2040005)

△ **NOTE:** **Uno 100 EM**
Uno 102 EM
Sabina EM
Sabina II EM



Use plug from the replaced control box!



NOTE: LikoLight has no extension cable

△ **NOTE**

- Make sure that the spare part is approved for the lift, and that it is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

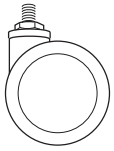
5.284
Front Wheel 75 mm
Framhjul 75 mm

Assembly Instruction
Monteringsanvisning

Prod. No. 20390001, 20490014

3SE630220-05
2010-05-20

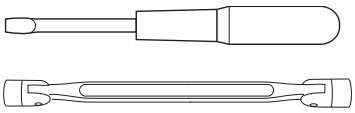
Contains:	**Qty:**
Front wheel 75mm	1



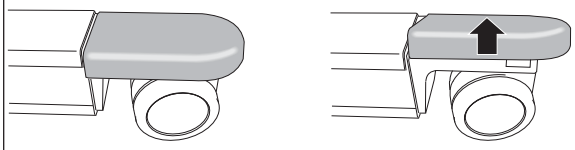
20390001 Fits: LikoLight

20490014 Fits:
Golvo 7000 fr S/N 7024206
Golvo 7007 fr S/N 7729722
Golvo 7000ES Classic / 7007 ES Classic
Golvo 7007 LowBase
Golvo 8000/8008
Golvo 8000 Classic / 8008 Classic
LikoLight (from S/N 2503102)
RollOn
Viking M 20490005 (from S/N 7102064)
Viking M 2040015
Viking S
Viking XS

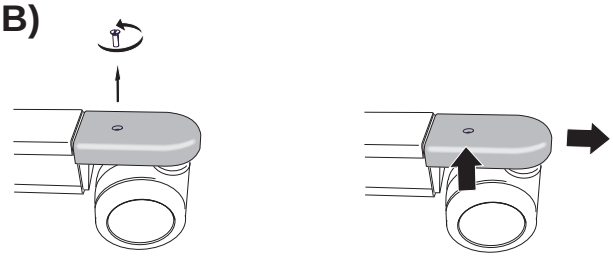
Tools required:



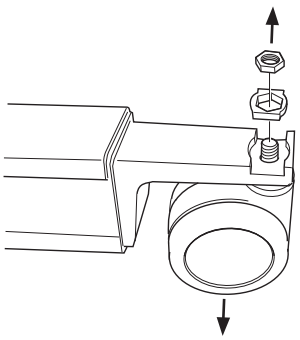
A)



B)



A&B)



Mount the new spare part. Assemble in reverse order.

⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.285

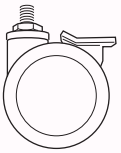
Rear Wheel 75 mm
Bakhjul 75 mm

Assembly Instruction
Monteringsanvisning

Prod. No. 20390002
20490015

3SE630221-05
2010-05-20

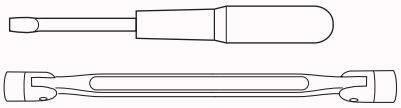
Contains:	**Qty:**
Rear wheel 75mm	1



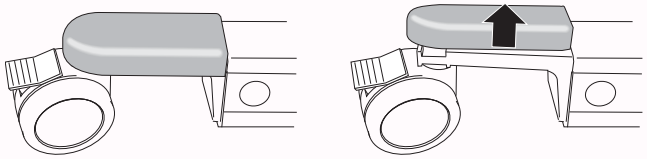
20390002 Fits: LikoLight up to S/N 2503101

20490015 Fits: Golvo 7000 fr S/N 7024206
Golvo 7007 fr S/N 7729722
Golvo 7000ES Classic / 7007 ES Classic
Golvo 7007 LowBase
Golvo 8000/8008 (all models)
LikoLight (from S/N 2503102)
RollOn
Viking M 20490005 (from S/N 7102064)
Viking M 2040015
Viking S
Viking XS

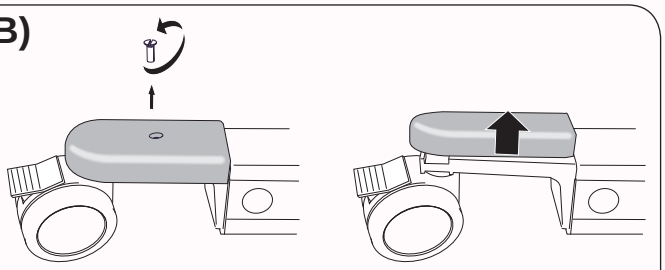
Tools required:



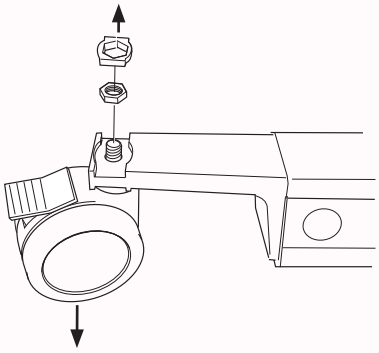
A)



B)



A&B)



Mount the new spare part. Assemble in reverse order.

⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.292

Hook for HandControl 2, 4, 6 button
Krok för handkontroll 2, 4, 6 knappar

Assembly Instruction
Monteringsanvisning

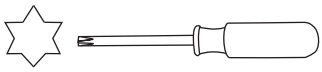
Prod. No. 20090058

3SE630210-06
2012-10-16

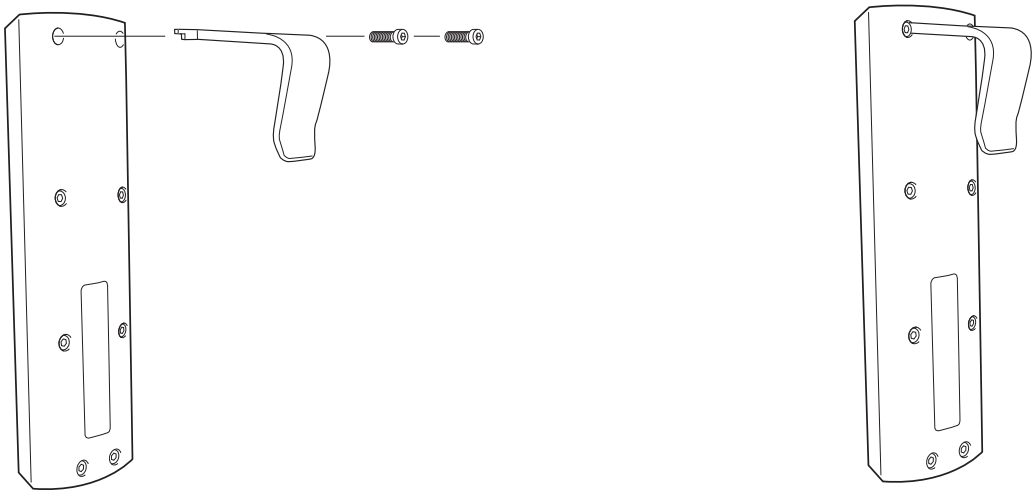
Contains: **Qty:**
Hook for Hand control 2,4,6 1

Fits:
20090089 HandControl 6-button
20190016 HandControl EE 4-button
20190017 HandControl EM 2 button

Tools required:



T10



⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

Liko
A Hill-Rom Company

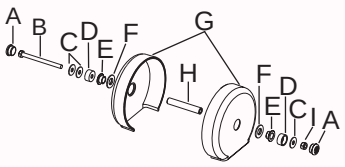
Lift Arm Plastic Cover
Pelarkåpa

Assembly Instruction
Monteringsanvisning

Prod. No. 20490023

3SE630250-07
2012-08-22

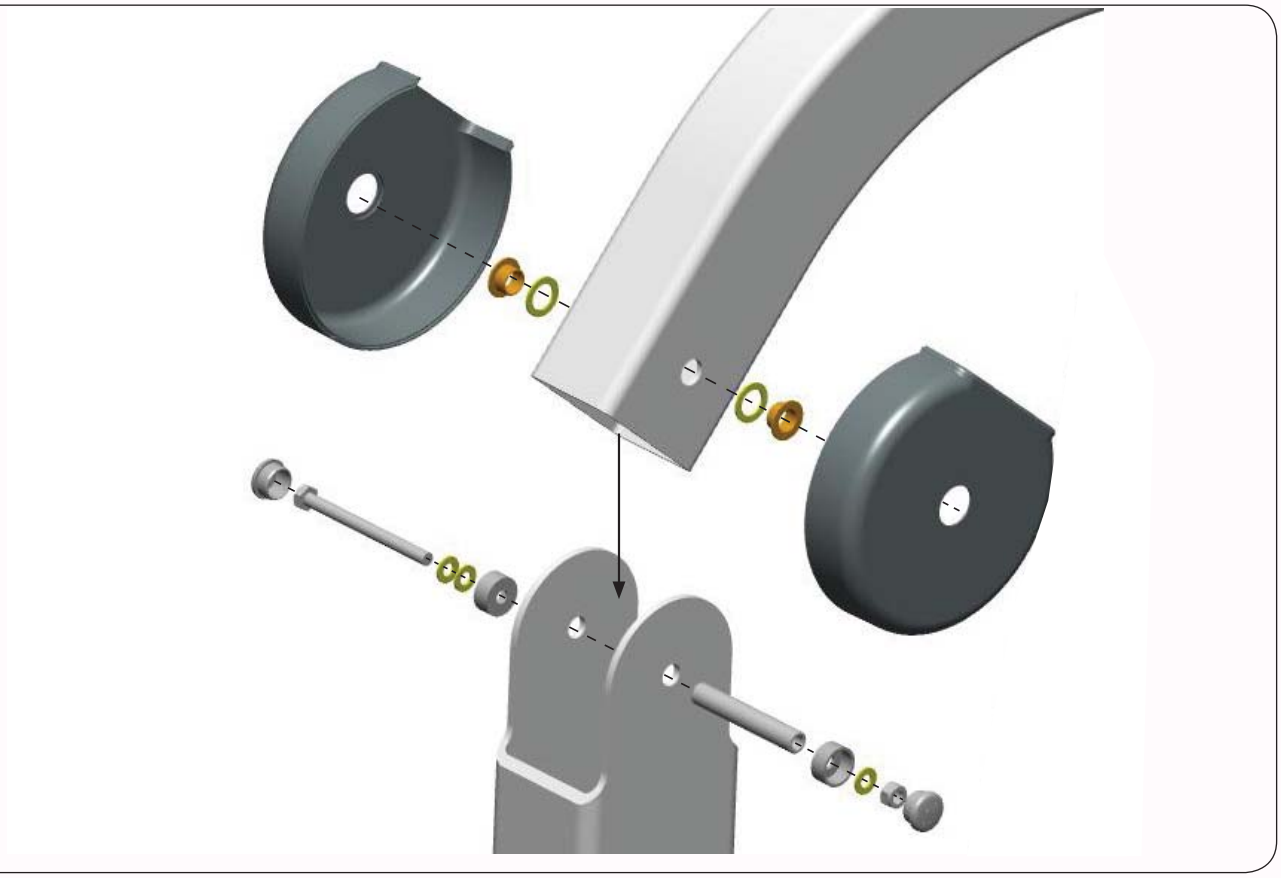
Contains:		Qty:
A	Cover hat Liko	2
B	Screw M6S M6x75	1
C	Washer PS 6x12x1	3
D	Cover hat Liko bottom	2
E	Flanged washer	2
F	Distance washer PS 12x18x1	2
G	Plastic cover mast Vi XS	2
H	Sleeve bearing Mob.62	1
I	Locking nut M6 Nyloc	1



Fits:	Prod. No.
Viking XL	2040003 from S/N 802000
Viking XL	2040013
Viking XL	2040033
Viking L	2040004 from S/N 7200795
Viking L	2040014
Viking L	2040034
Viking M	2040005 from S/N 7106201
Viking M	2040015
Viking M	2040035
Viking XS	2040007

Tools required:

2x 10 mm



⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.308
Overhead Beam Restoration set
Renoveringssats lyftarm

Assembly Instruction
Monteringsanvisning

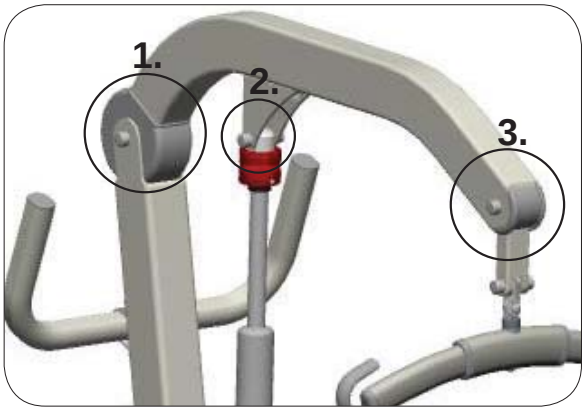
Prod. No. 20490024

3SE630251-08
2012-09-10

Pos	Contains:	Qty:
A	Cap Y Viking	2
B	Cap I Viking	2
C	Cover hat Liko	6
D	Cover hat Liko bottom	6
E	Sleeve bearing Mob.38	1
F	Sleeve bearing Mob.50	1
G	Sleeve bearing Mob.62	1
H	Plastic cover mast Vi XS	2
I	Nylon bearing 10/12x15	2
J	Locking nut M6 Nyloc	3
K	Distance washer PS 12x18x1	2
L	Screw M6S M6x50	1
M	Screw M6S M6x60	1
N	Screw M6S M6x75	1
O	Washer PS 6x12x1	6
P	Flanged washer	2

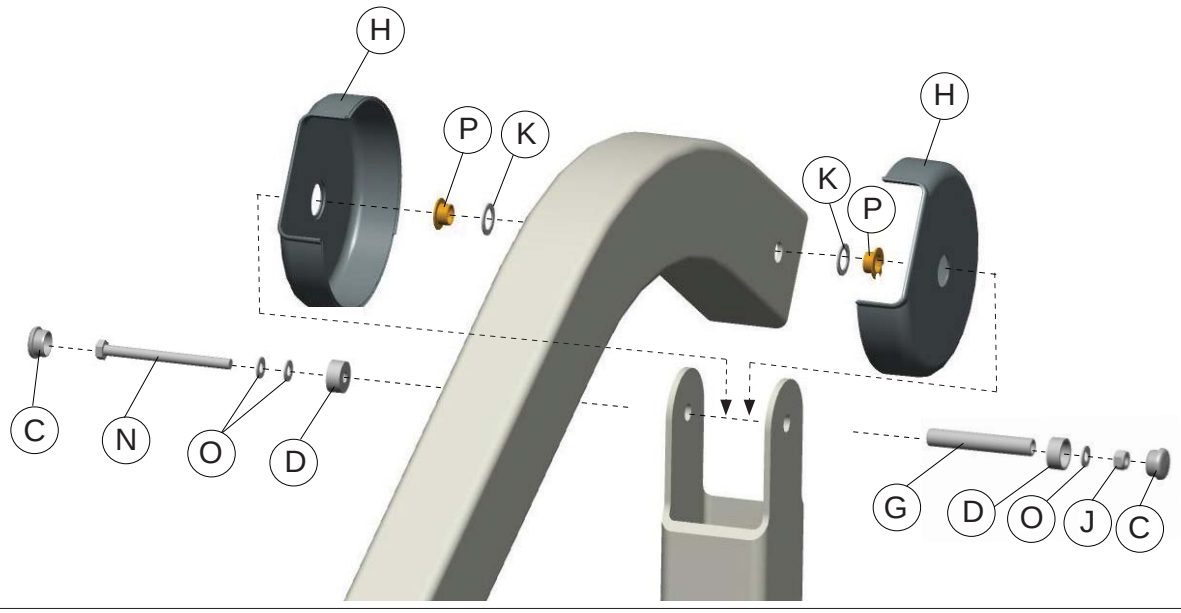
Fits:	Prod. No.
Viking XL	2040003 from S/N 802000
Viking XL	2040013
Viking XL	2040033
Viking L	2040004 from S/N 7200795
Viking L	2040014
Viking L	2040034
Viking M	2040005 from S/N 7106201
Viking M	2040015
Viking M	2040035
Viking XS	2040007

Tools required:



Viking XS

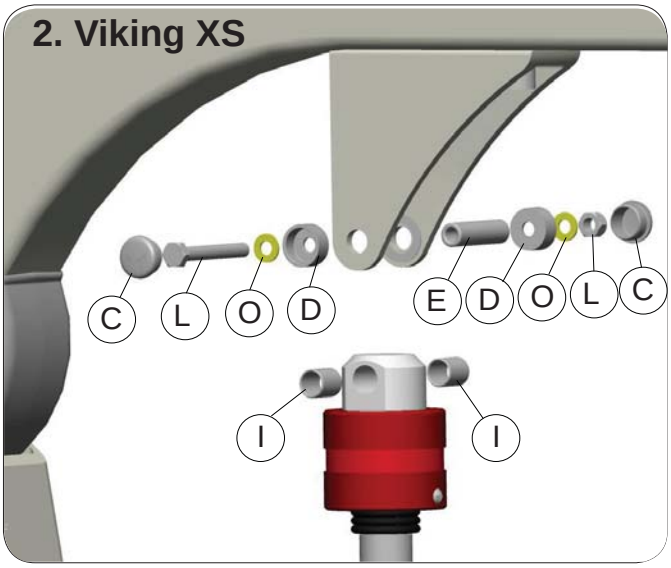
1.

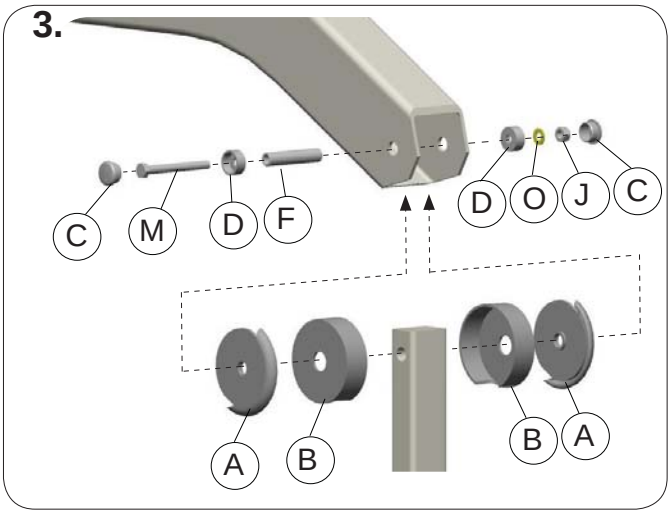


Assembly Instruction
Monteringsanvisning

Prod. No. 20490024

Pos	Contains:	Qty:
A	Cap Y Viking	2
B	Cap I Viking	2
C	Cover hat Liko	6
D	Cover hat Liko bottom	6
E	Sleeve bearing Mob.38	1
F	Sleeve bearing Mob.50	1
G	Sleeve bearing Mob.62	1
H	Plastic cover mast Vi XS	2
I	Nylon bearing 10/12x15	2
J	Locking nut M6 Nyloc	3
K	Distance washer PS 12x18x1	2
L	Screw M6S M6x50	1
M	Screw M6S M6x60	1
N	Screw M6S M6x75	1
O	Washer PS 6x12x1	6
P	Flanged washer	2





Viking XS

Viking M

Viking L

Viking XL

⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

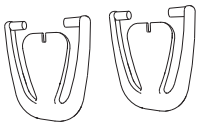
5.311
Latch, composite
Urkrokningsskydd komposit

Assembly Instruction
Monteringsanvisning

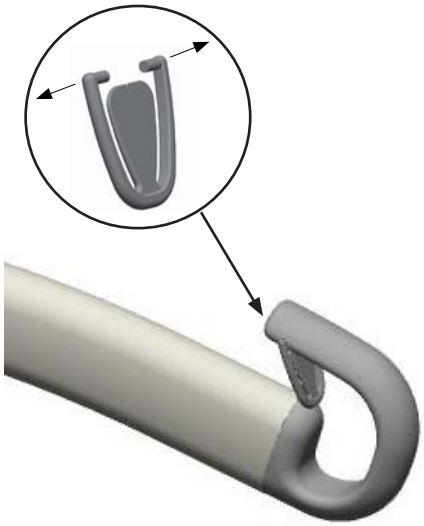
Prod. No. 31590014

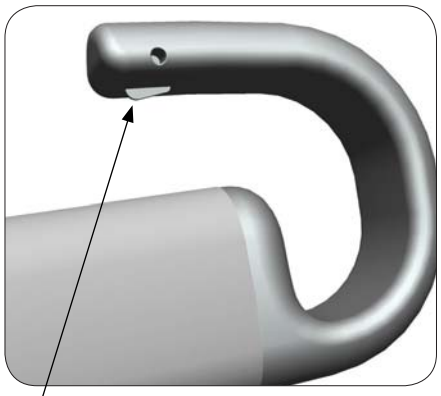
3SE640242-05
2011-02-22

Contains: Latch composite
Qty: 2



Fits:		**From S/N:**
3156074	Universal SlingBar 350	1299511
3156075	Universal SlingBar 450	1299511
3156076	Universal SlingBar 600	1299511
3156077	Universal TwinBar 670	1299511
3156079	Universal SideBars 450	1299511
3156084	Universal SlingBar 350 with Quick-release Hook	1299511
3156085	Universal SlingBar 450 with Quick-release Hook	1299511
3156086	Universal SlingBar 600 with Quick-release Hook	1299511
3156087	Universal TwinBar 670 with Quick-release Hook	1299511
3156094	Universal SlingBar 350 R2R	1299511
3156095	Universal SlingBar 450 R2R	1299511
20590006	SlingBar Liko 450	1700101





The Latch can only be used on composite hooks equipped with a locator.

⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.328
Restoration set motor attachment
Renoveringssats motorinfästning

Assembly Instruction
Monteringsanvisning

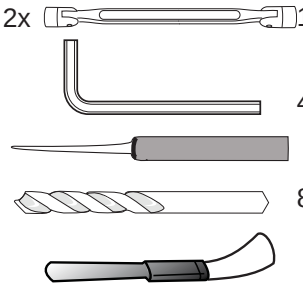
Prod. No. 20490028

3SE640258-05
2010-04-21

Contains:	**Qty:**
Link attachment Viking M Alu	2
Distance Leg 12/9	2
Screw M6S M10x40 GL=15mm	2
Nylon bearing 10x12x6	2
Locking nut M10 nyloc	2
Screw K6S M8x60	2
Nut M6LM M8	2
Coverhat M10 grey	4

Fits:
Viking M

Tools required:



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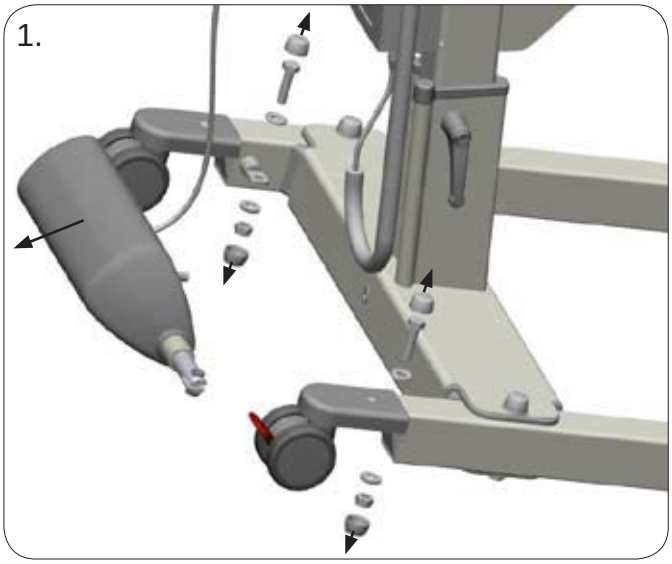

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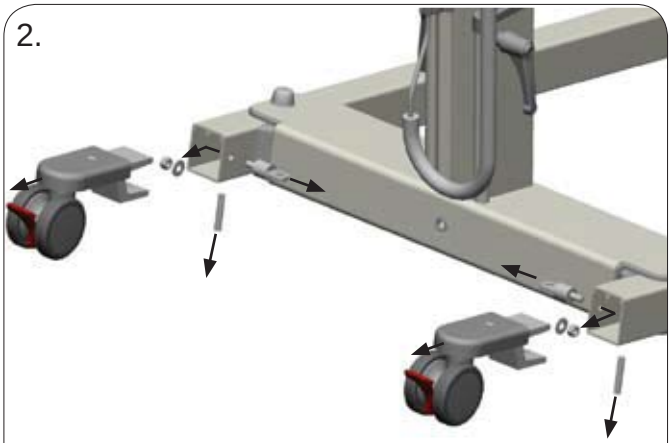

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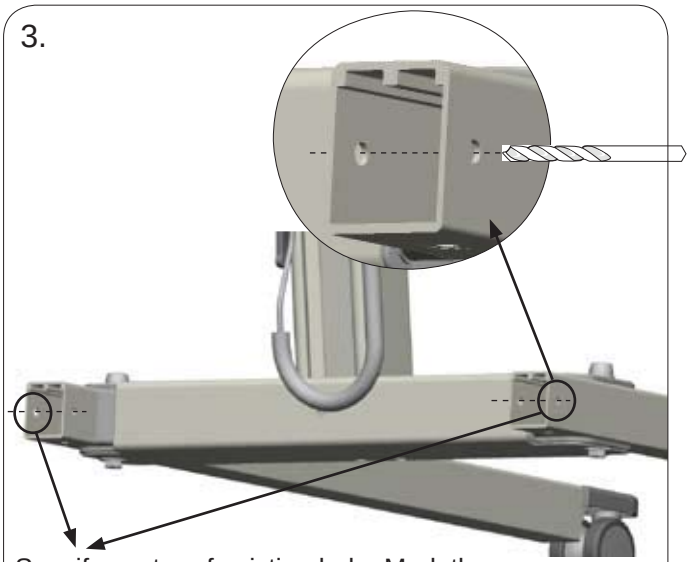
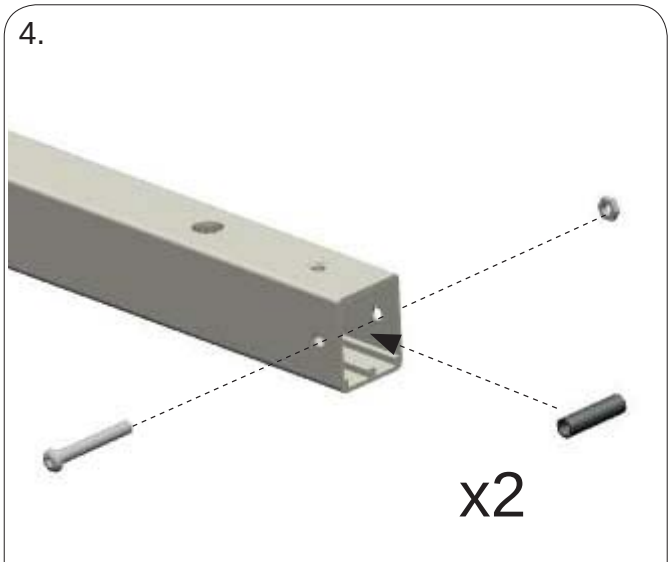
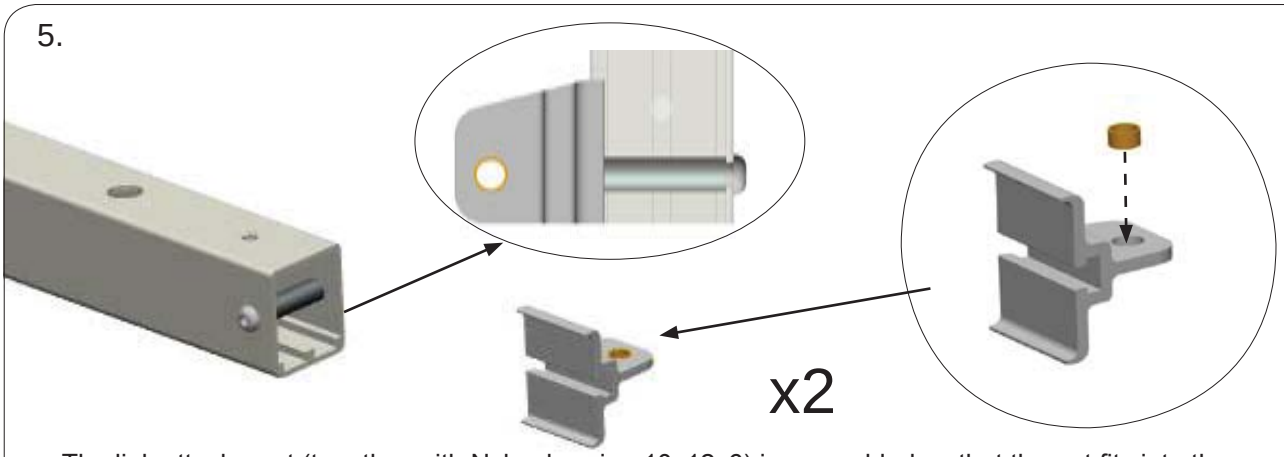


Specify center of existing hole. Mark the same distance on opposite side with a centre punch. Drill one hole, Ø 8.2 mm / 0,32 inch on each leg.

4.

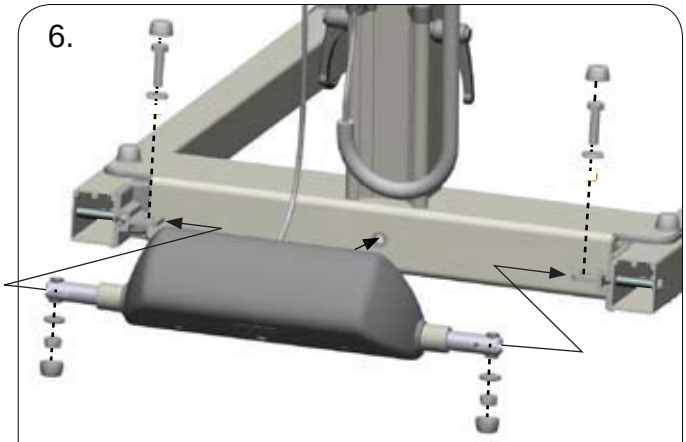


5.



The link attachment (together with Nylon bearing 10x12x6) is assembled so that the nut fits into the groove, in line with the leg. Then - tighten the screw.

6.



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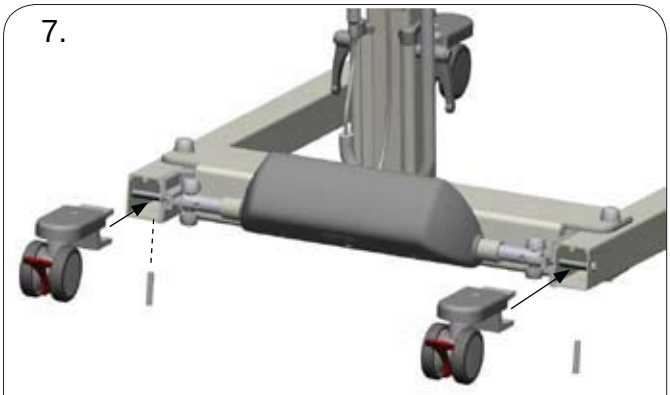
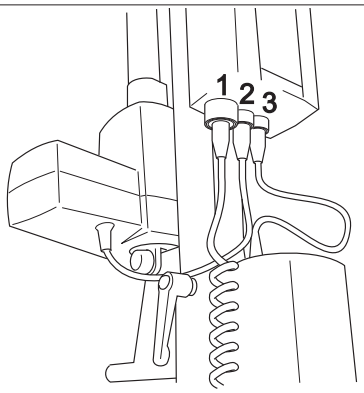


Apply Kernite Unlock 2000 on each screw tip.

8.



Connect the cables as follows:
- Handcontrol cable to socket No.1
- Cable for lift arm motor to socket No.2
- Base motor cable to socket No.3

9.

⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko and using original Liko spare parts.

5.331
Outer Tube
Skyddsrör

Assembly Instruction
Monteringsanvisning

Prod. No. 20490030

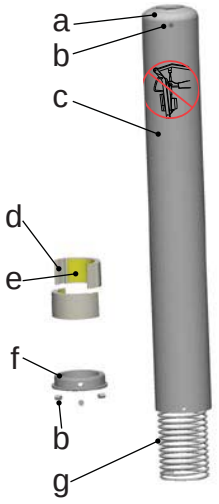
3SE640260-05
2011-03-03

Contains:

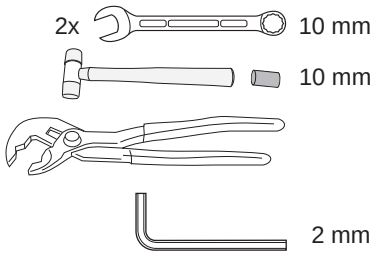
		Qty:
a	Top cover	1
b	Screw P6SS M4x5	6
c	Tube	1
d	Snap bushing	2
e	Two sided adhesive	2
f	Bushing	1
g	Compression spring	1

Fits:

Viking M
Viking L Prod. No. 2040004
Viking XL Prod. No. 2040003

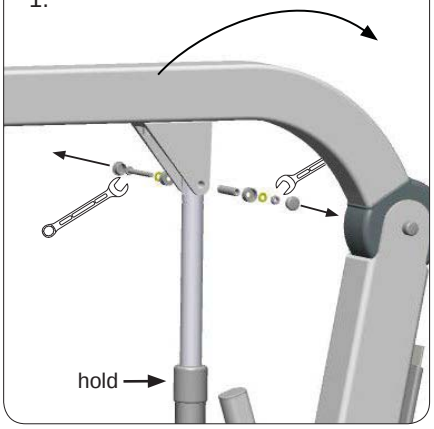


Tools required:



Isopropyl alcohol and water + rag

1.



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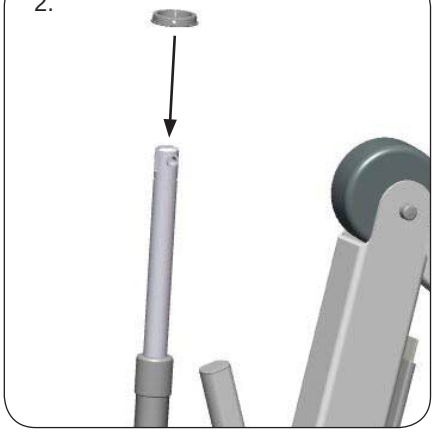

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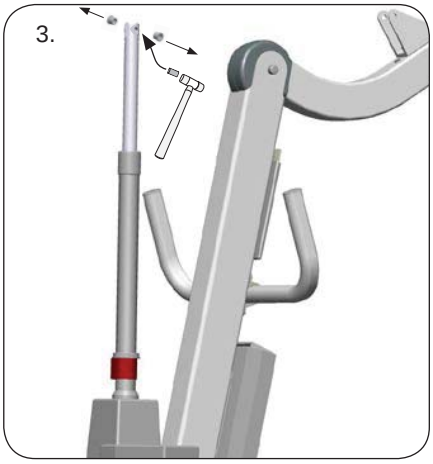

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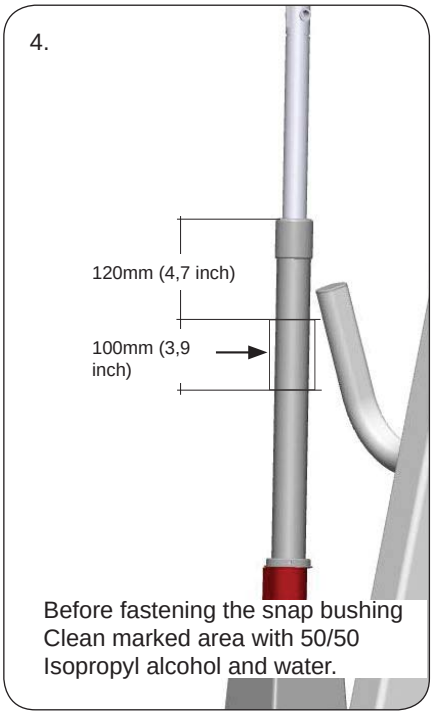
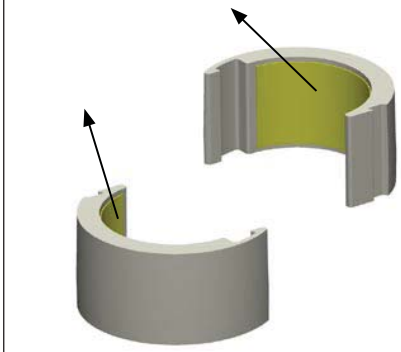


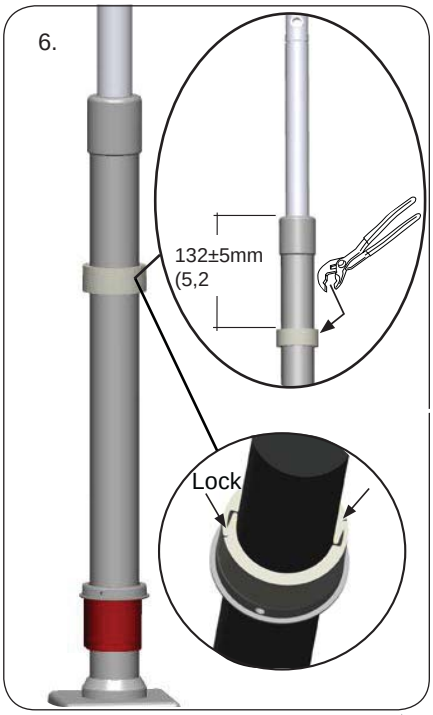
Before fastening the snap bushing Clean marked area with 50/50 Isopropyl alcohol and water.

5.



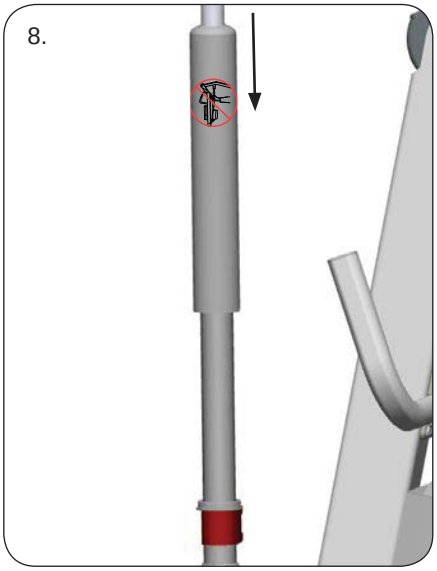
Remove the tape cover!

6.



7.

8.



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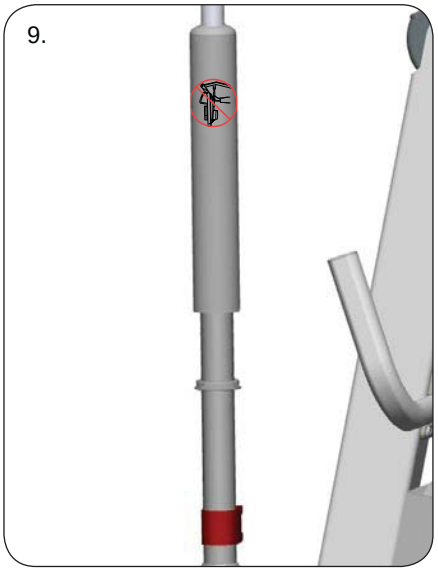

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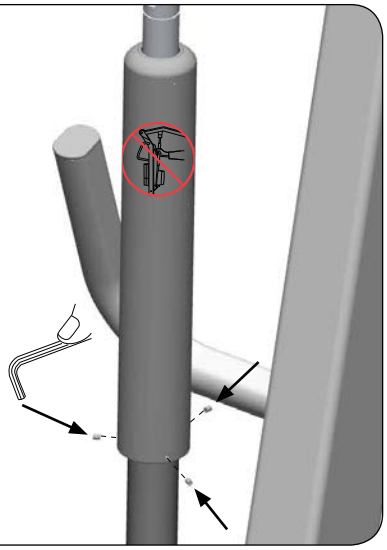
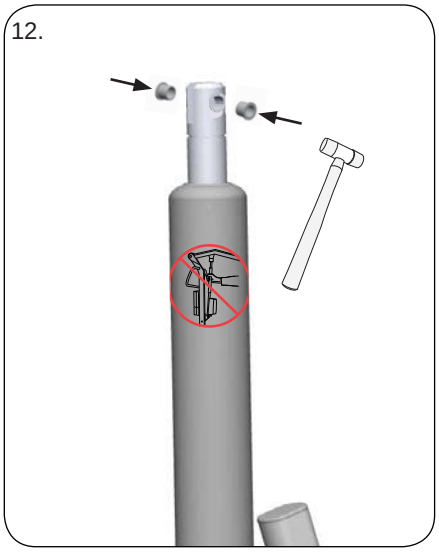


11.

The three screws should be tightened until flush with surface of tube.

△Make sure the Outer Tube easy slides up and down.

12.



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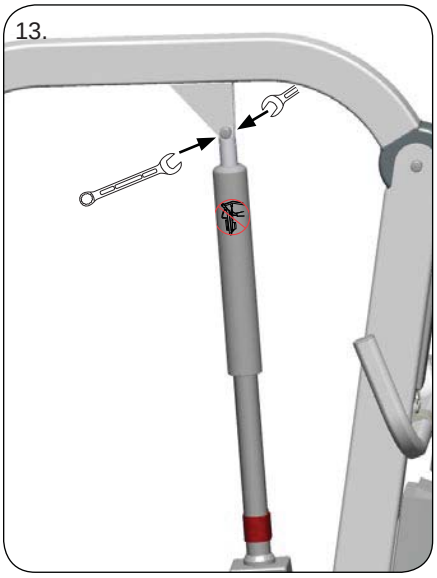


△ **NOTE**

- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko/Hill-Rom and using original Liko spare parts.

5.333

Wireless Handcontrol HBL 20
Handkontroll IR HBL20

Assembly Instruction
Monteringsanvisning

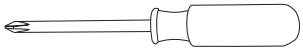
Prod. No. 20490031

3SE640298-04
2011-03-03

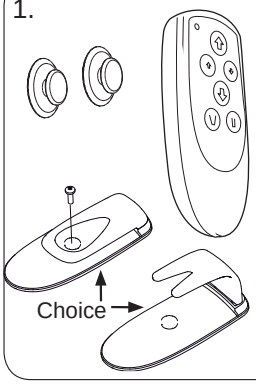
Contains:	**Qty:**
Handcontrol HBL20	1
Clips with hook HBL20	1
Charge Cable Hook	2

Fits:
Golvo 8000 / 8008
Viking M Prod. No. 2040015
Viking L Prod. No. 2040014
Viking XL Prod. No. 2040013

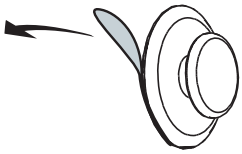
Tools required:



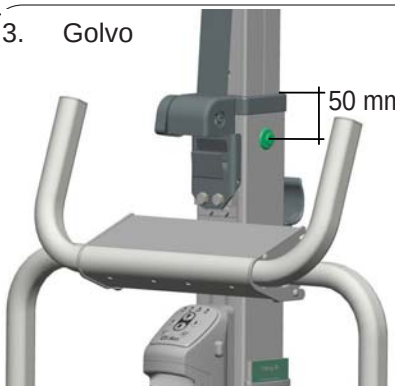
1.



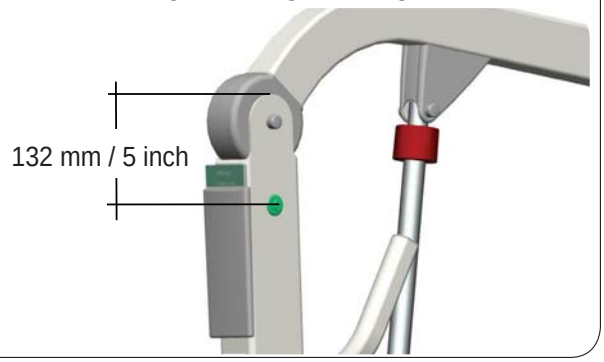
2.



3. Golvo



Viking M, Viking L, Viking XL



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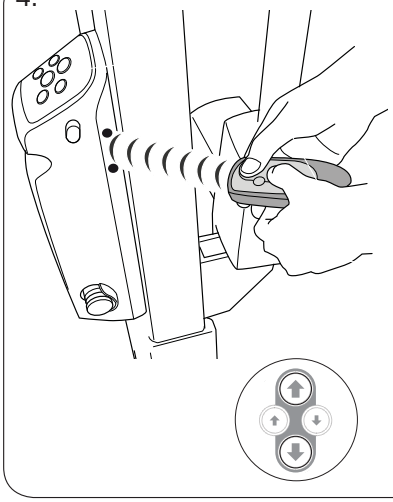
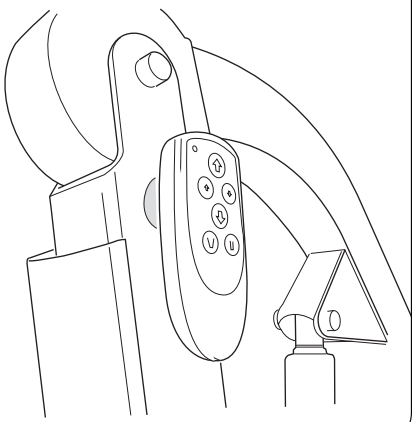


A. To activate IR control: Hold the hand control IR about 20 cm / 8 inch. from the control unit's IR receiver and press the large UP and DOWN buttons on the hand control simultaneously for about 2 seconds. A signal is heard when the function is activated. The lift is now ready to use with Handcontrol IR.

B. Check to determine if other lifts in the room are affected by your hand control. If other lifts are affected by your hand control: Use the large UP and DOWN buttons on the operation panel of the lift that is to be used. Press both buttons simultaneously until a signal sounds. The lift has now been assigned a unique communication code. Now, activate IR control according to procedure A, above.

5.



⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.334

Control Unit CBL Vi M
Kontrollbox CBL Vi M

Assembly Instruction
Monteringsanvisning

Prod. No. 20490032

3SE640299-04
2012-10-25

Contains:	**Qty:**
Control Unit CBL20	1
Cable cover	1
Screw cable cover	2
Allen Key 2,5 mm	1
Screw M5x35	2

Fits:	**Prod. No.**
Viking M	2040015

Requires:	**Prod. No.**
Liko Service System (for programming)	21090024

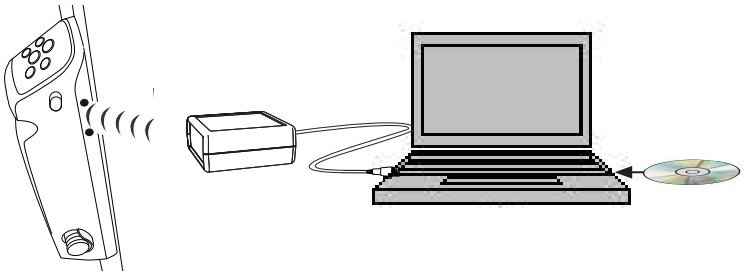
Tools required:

2,5 & 3 mm

1.

Before use!

Control Unit CBL Vi M must be programmed with Liko Service System, Prod. No. 21090024 according to the Instruction Guide for the Service System.



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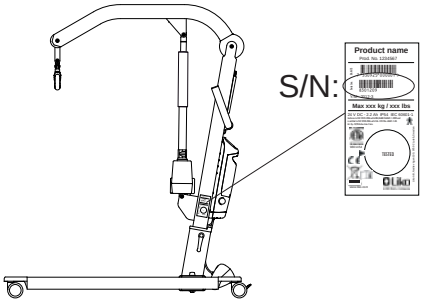
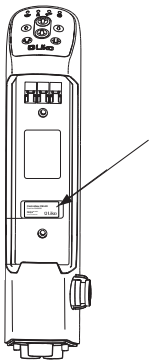
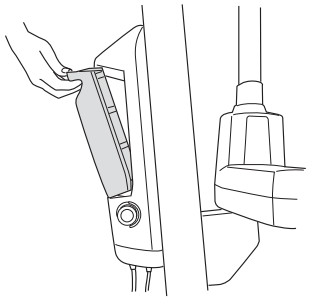




With permanent marker, fill in the S/N at the product label (same as on the Viking M)

3.



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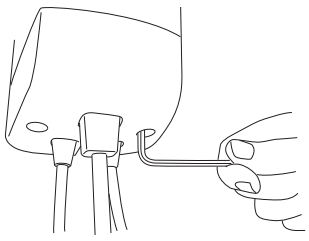

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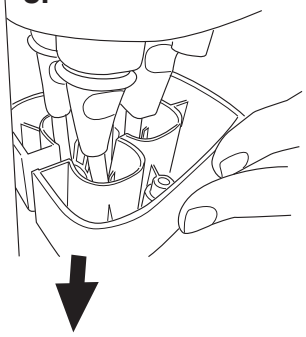

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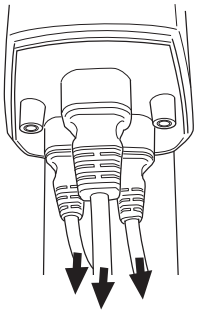
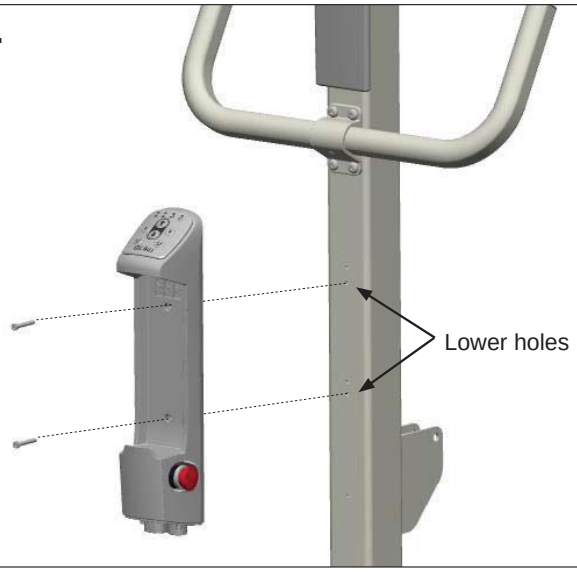


Assembly Instruction
Monteringsanvisning

Prod. No. 20490032

7.



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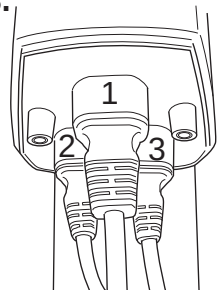
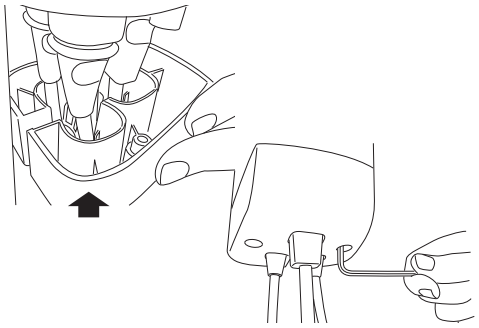
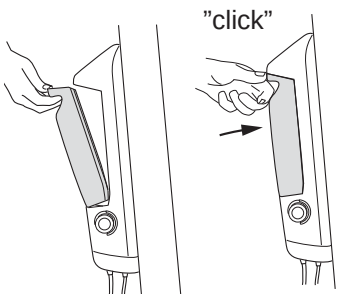
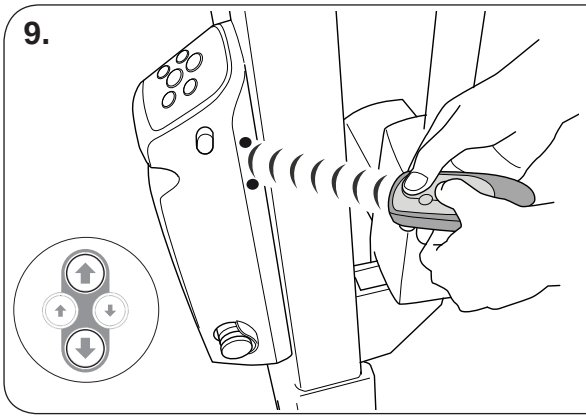






- Charger cable; socket 1
- Lift motor cable; socket 2
- Base-motor cable; socket 3

9.



Enable IR control:

Hold the HandControl IR approx. 20 cm (8 in) from the control box’s IR receiver and press the hand control’s large Up and Down buttons simultaneously for approx. 2 sec. When a sound signal is emitted, the function is enabled.

The lift is now ready to be used with the HandControl IR.

⚠ NOTE

- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.334C

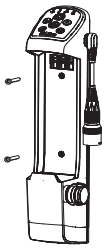
Control Unit CBL Vi M, Cable
Kontrollbox CBL Vi M, kabel HK

Assembly Instruction
Monteringsanvisning

Prod. No. 20490053

3SE690226-01
2012-10-25

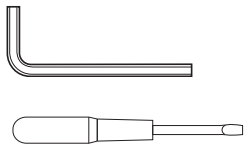
Contains:	**Qty:**
Control Unit CBL20 with cable	1
Cable cover	1
Screw cable cover	2
Screw M5x35	2
Allen Key 2,5 mm	1



Fits:	**Prod. No.**
Viking M	2040035

Requires:	**Prod. No.**
Liko Service System (for programming)	21090024

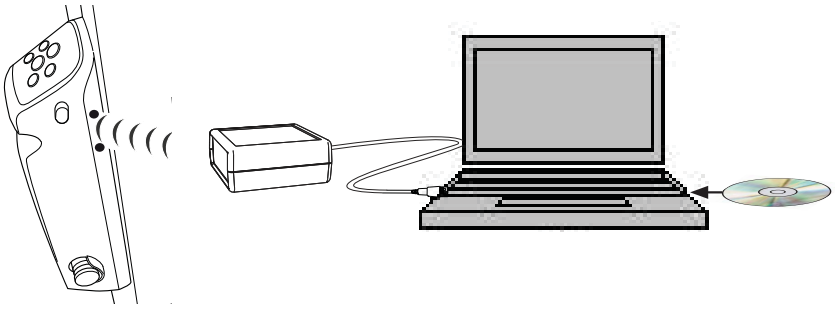
Tools required:



2,5 & 3 mm

1. ***Before use!***

Control Unit CBL Vi M must be programmed with Liko Service System, Prod. No. 21090024 according to the Instruction Guide for the Service System.



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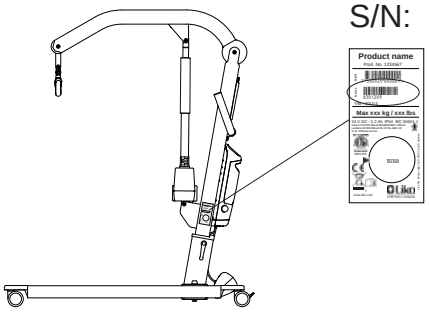
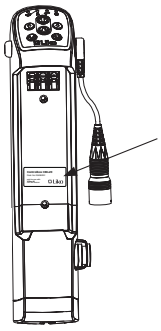
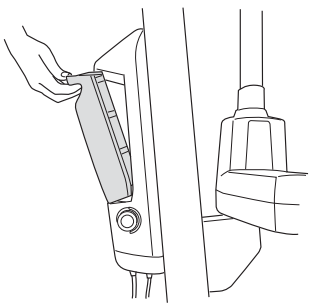


S/N:



With permanent marker, fill in the S/N at the product label (same as on the Viking M)

3.



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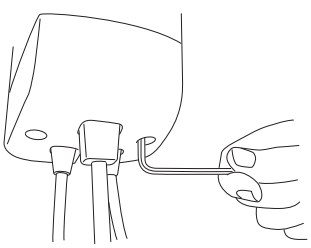

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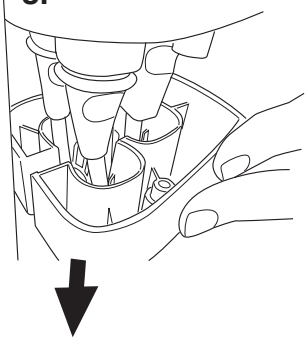

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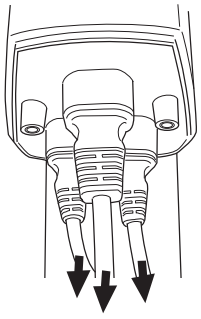
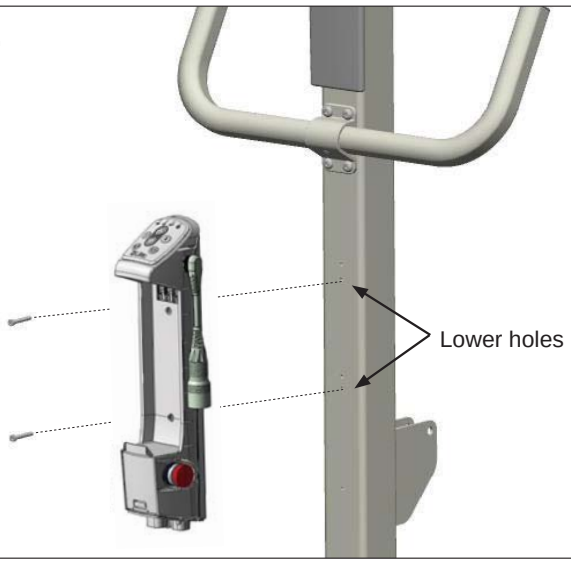


Assembly Instruction
Monteringsanvisning

Prod. No. 20490053

7.



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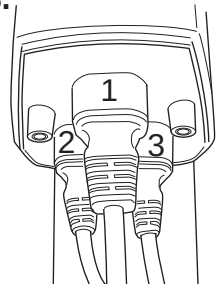
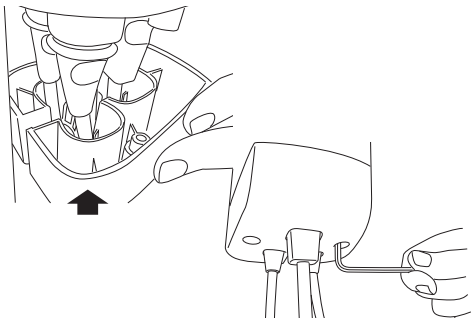
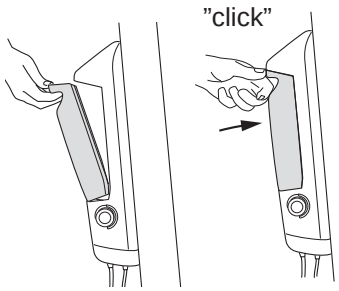
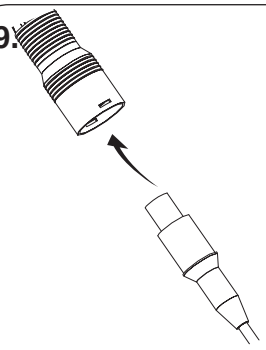




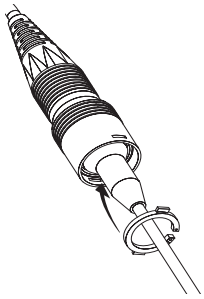


- Charger cable; socket 1
- Lift motor cable; socket 2
- Base-motor cable; socket 3

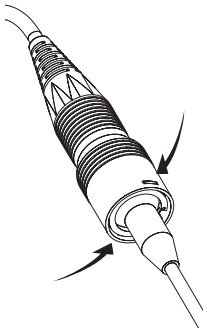
9.



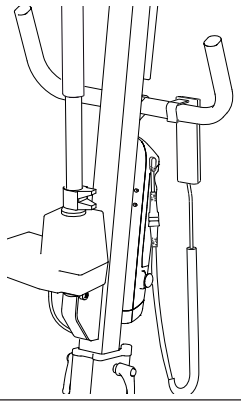
Connect the Hand control.



Attach the locking ring.



Make sure the rectangular tabs at the locking ring are fixed.



⚠ NOTE

- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

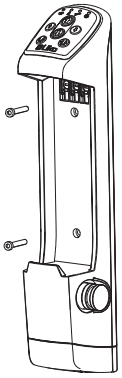
5.336
Control Unit CBL, by S/N
Kontrollbox CBL S/N-styrd

Assembly Instruction
Monteringsanvisning

Prod. No. 20490039

3SE650270-03
2012-10-24

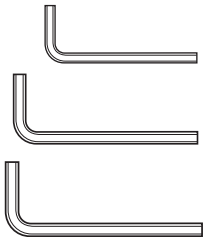
Contains:	**Qty:**
Control Unit CBL20	1 (pre-configured)
Cable cover	1
Screw cable cover	2
Screw M5x35	2 (Viking)
Screw M5x50	2 (Golvo)
Allen Key 2,5 mm	1



Fits:	**Prod. No.**
Viking XL	2040013
Viking L	2040014
Viking M	2040015
Golvo 8008 LowBase	2000019
Golvo 8000	2000014
Golvo 8008	2000015
Golvo 8000 Classic	2000024
Golvo 8008 Classic	2000025

To order this Spare Part:
S/N from the Viking M the Control Unit is intended for, is required!

Tools required:



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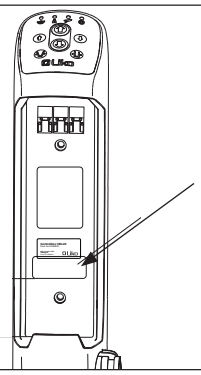
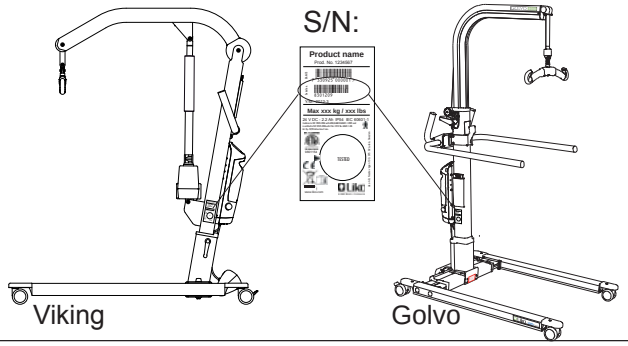


Before use! Make sure the S/N on the label on Control Unit CBL is the same as on the lift.



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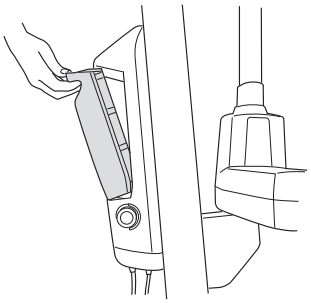

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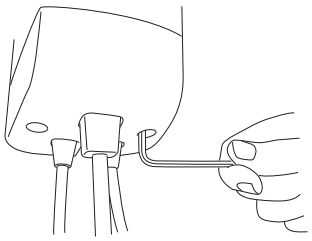

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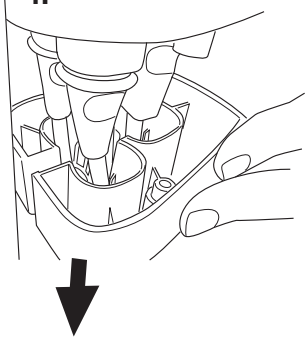

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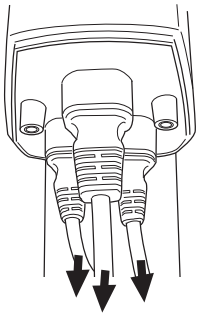
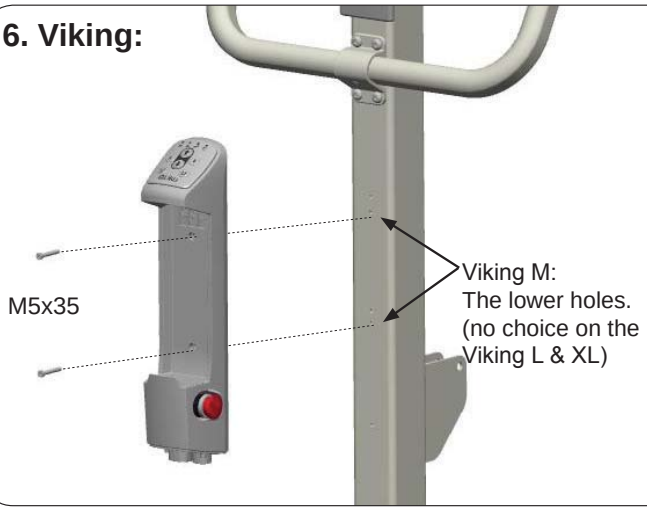
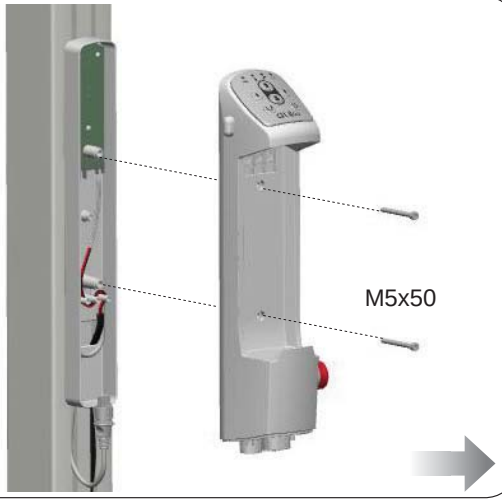


6. Viking:



Golvo:



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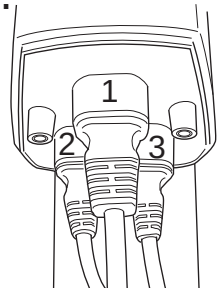
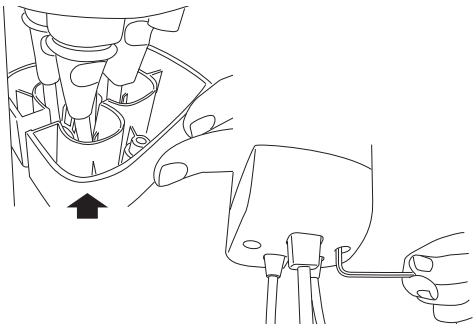
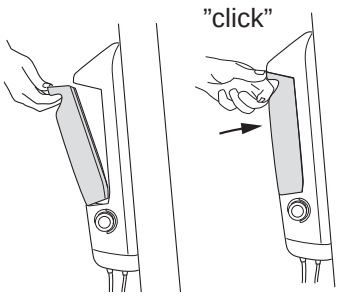
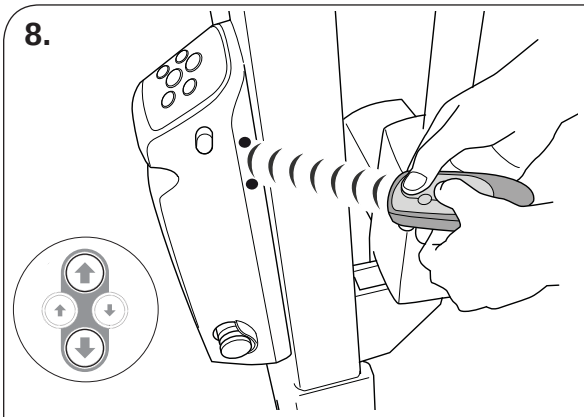






- Charger cable; socket 1
- Lift motor cable; socket 2
- Base-motor cable; socket 3

8.



A. To activate IR control: Hold the hand control IR about 20 cm / 8 inch. from the control unit’s IR receiver and press the large UP and DOWN buttons on the hand control simultaneously for about 2 seconds. A signal is heard when the function is activated. The lift is now ready to use with Hand control IR.

B. Check to determine if other lifts in the room are affected by your hand control. If they are: Use the large UP and DOWN buttons on the operation panel of the lift that is to be used. Press both buttons simultaneously until a signal sounds. The lift has now been assigned a unique communication code. Now, activate IR control according to procedure A, above.

⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

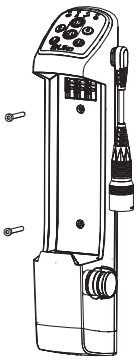
5.336C
Control Unit CBL, by S/N, Cable
Kontrollbox CBL S/N-styrd, kabel HK

Assembly Instruction
Monteringsanvisning

Prod. No. 20490054

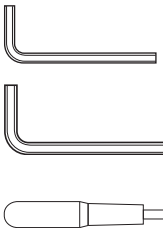
3SE690227-02
2013-01-31

Contains:	**Qty:**
Control Unit CBL20, cable	1 (pre-configured)
Cable cover	1
Screw, cable cover	2
Screw M5x35	2 (Viking)
Screw M5x50	2 (Golvo)
Allen Key 2,5 mm	1



Fits:	**Prod. No.**
Viking XL	2040033
Viking L	2040034
Viking M	2040035
Golvo 8008 LowBase	2000039
Golvo 8000	2000034
Golvo 8008	2000035

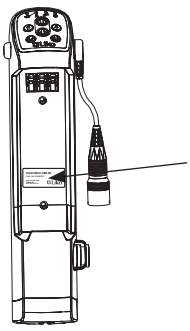
Tools required:



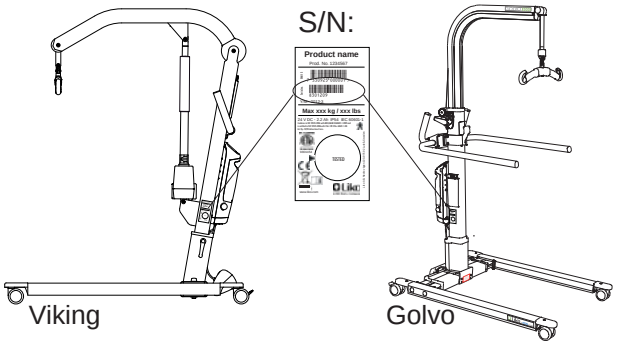
2,5 mm
(provided)

3 & 4mm

1.



Before use! Make sure the S/N on the label on Control Unit CBL is the same as on the lift.



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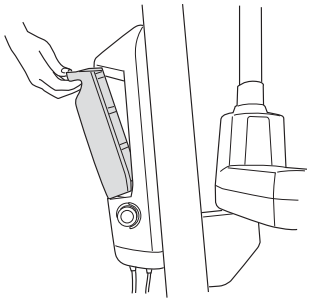

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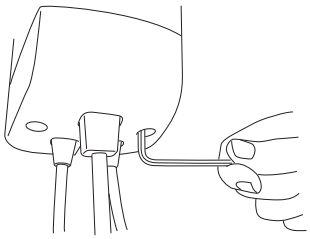

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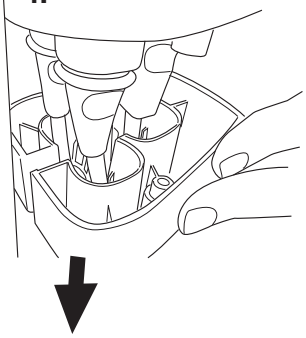

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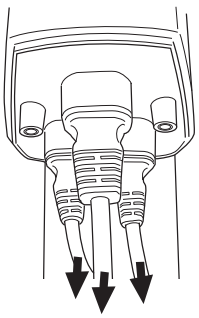
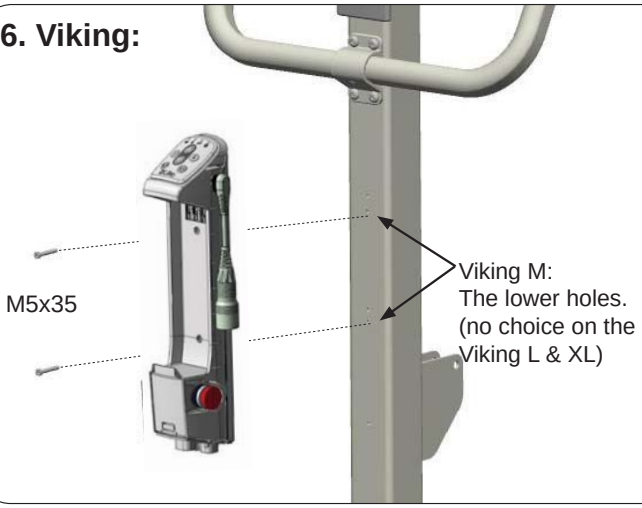
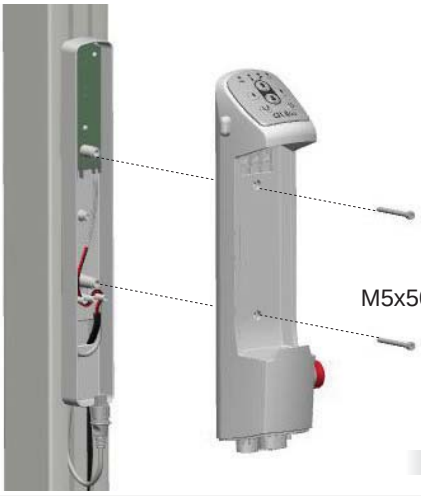


6. Viking:



Golvo:

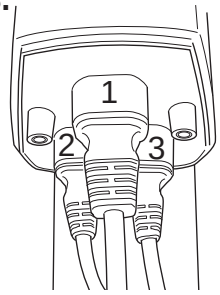


Assembly Instruction
Monteringsanvisning

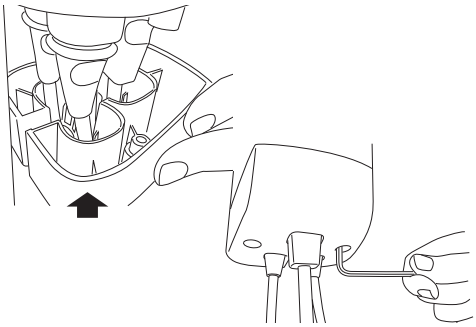
Prod. No. 20490054

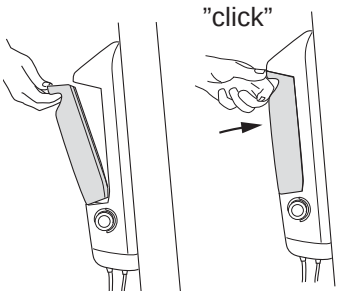
3SE690227-02

8.



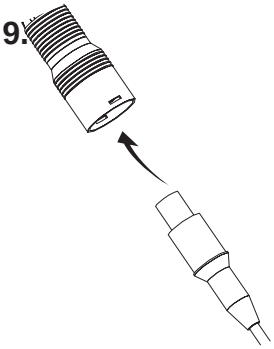
- Charger cable; socket 1
- Lift motor cable; socket 2
- Base-motor cable; socket 3



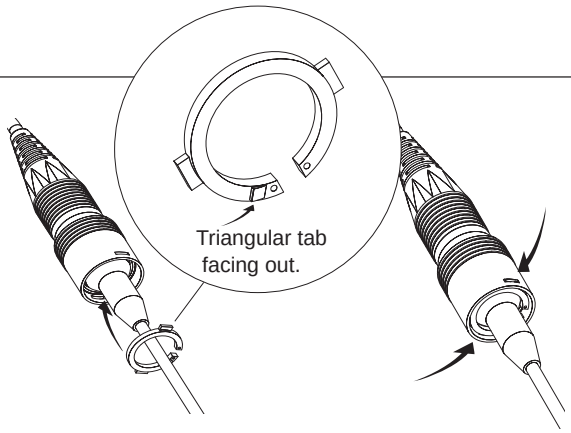


Battery
Prod. No. 2006107

9.

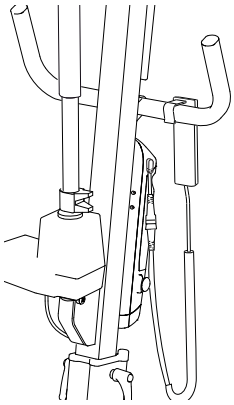


Connect the Hand control.



Attach the locking ring.

Make sure the rectangular tabs at the locking ring are fixed.



△ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.347

Actuator Viking M
Ställdon Viking M

Assembly Instruction
Monteringsanvisning

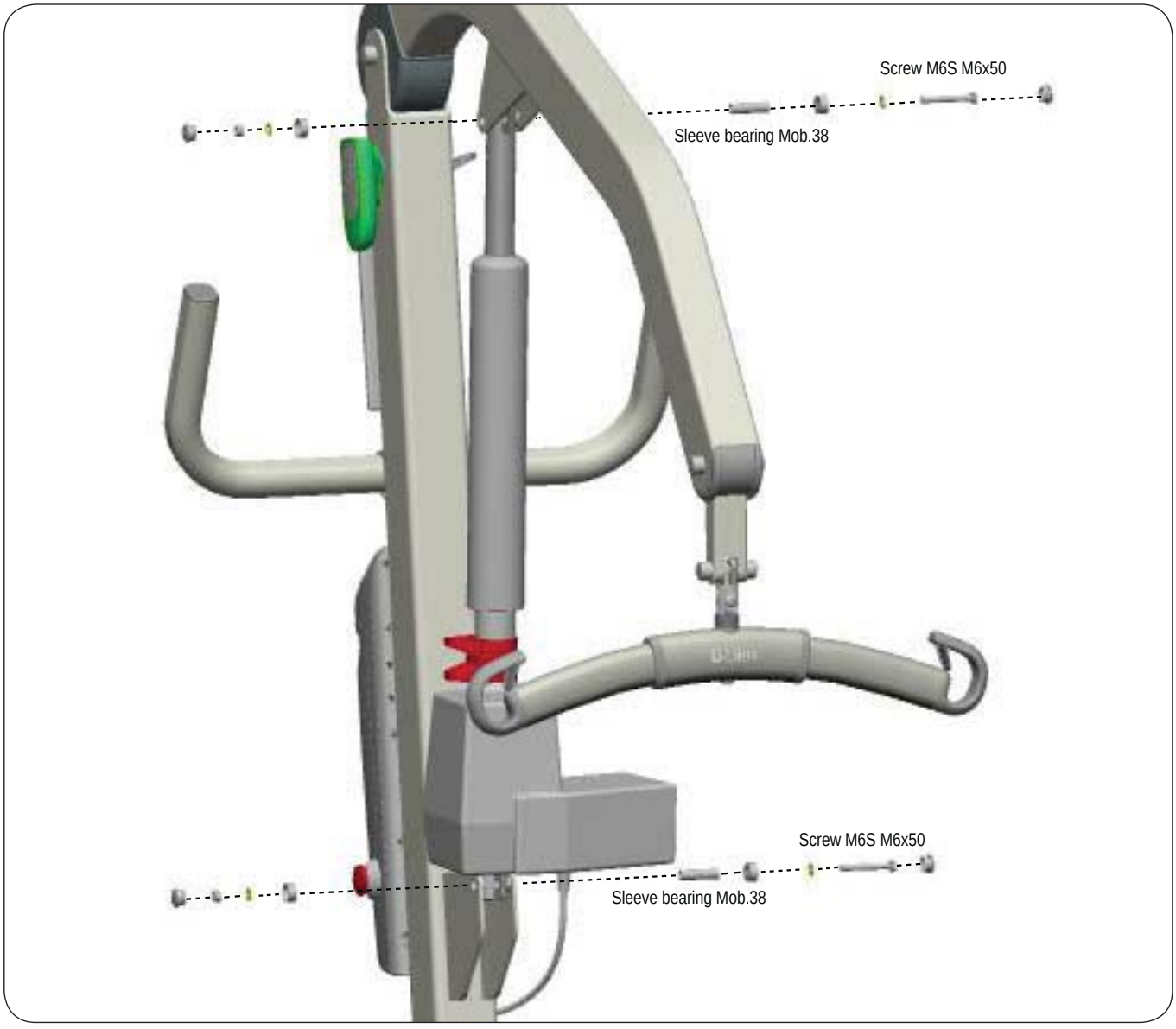
Prod. No. 20490033

3SE650214-02
2010-04-13

Contains:	**Qty:**
Actuator Viking M with Outer Tube	1
Sleeve bearing Mob.38	2
Coverhat Liko + Cover hat Liko bottom	4
Washer PS 6x12x1	4
Screw M6S M6x50	2
Locking nut M6 Nyloc	2

Fits:
Viking M (Prod. No. 2040015)

Tools required:
2X 10mm



⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko and using original Liko spare parts.
- Make sure the Outer Tube easy slides up and down.

5.348-349

Extension cable CBL20
Skarvkabel CBL20

Assembly Instruction
Monteringsanvisning

Prod. No. 21090018 Extension cable CBL20
21090019 Extension cable CBL20, US

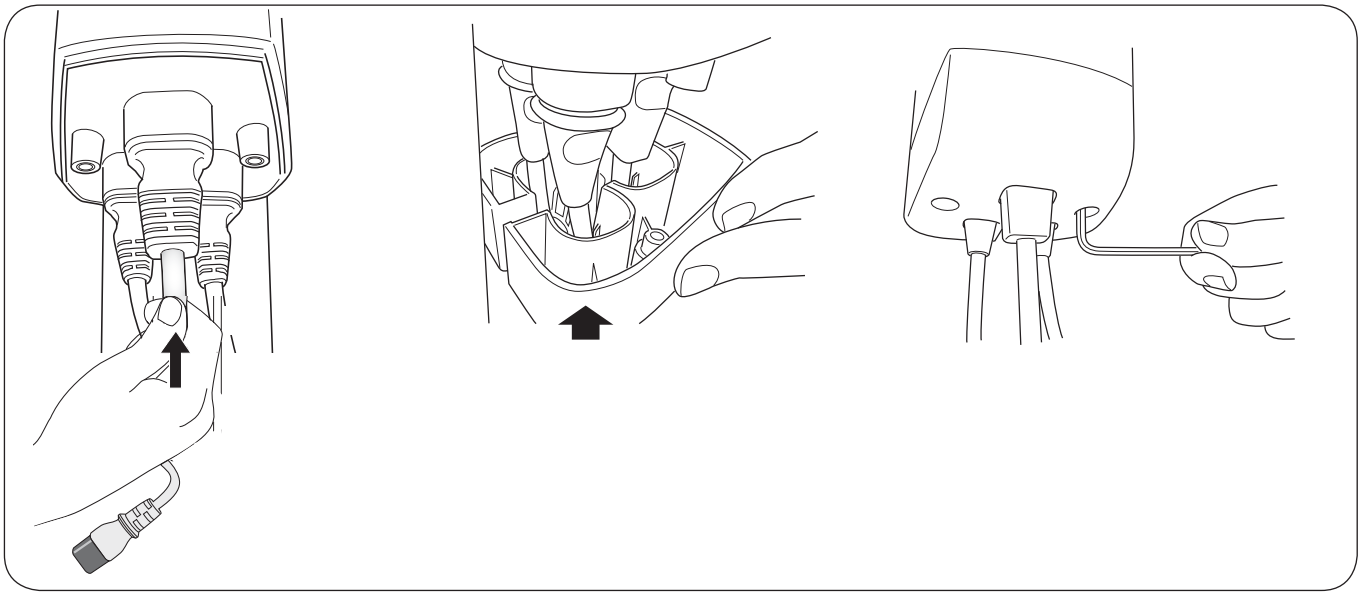
3SE650216-05
2012-09-11

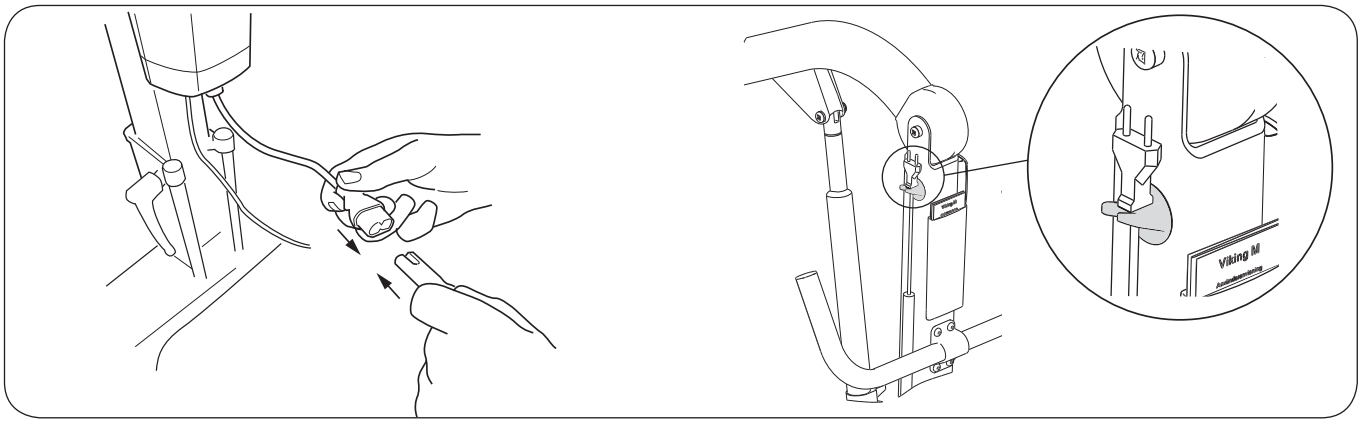
Contains:	**Qty:**
Adapter cable charging	1

Fits:	**Prod. No:**
Golvo 8000/8008	(all models)
Viking XL	2040013 and 2040033
Viking L	2040014 and 2040034
Viking M	2040015 and 2040035

Tools required:

2,5 mm





Connect the Charging cable to the Extension cable and the Extension cable to the wall socket (100-240 V AC). The battery is fully charged after 5 hours.

After completed charging, place the cable on the Charge cable hook.

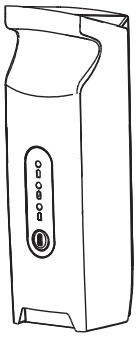
⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.350
Extra battery box
Extra batteribox

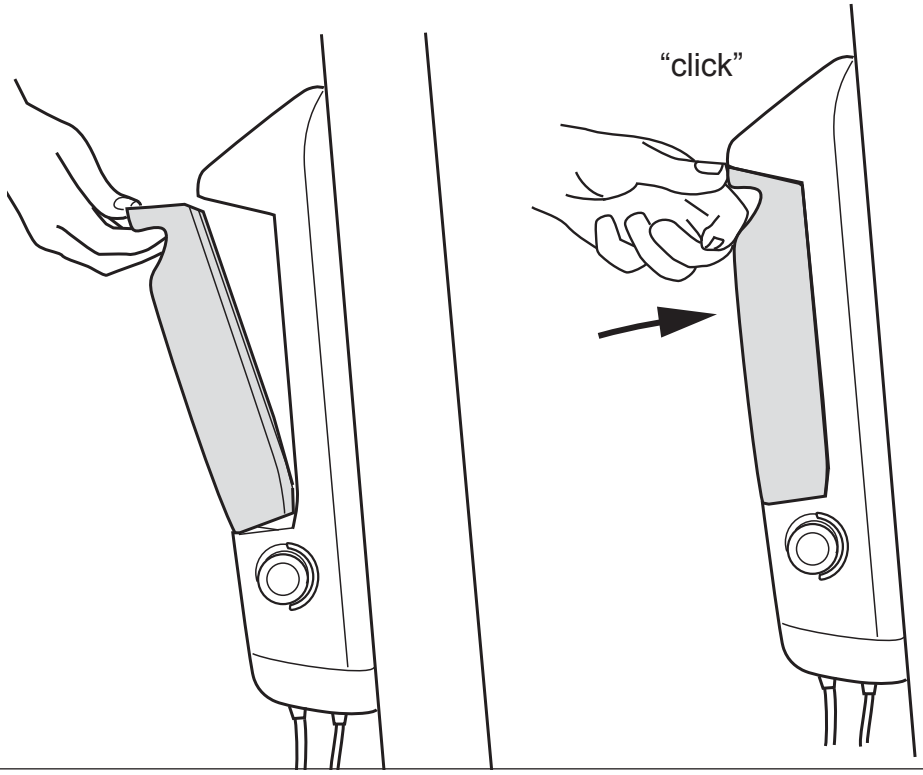
Assembly Instruction
Monteringsanvisning

Prod. No. 2006107

Contains:	**Qty:**
Batteri BAL20	1



Fits:	**Prod. No.**
Viking M	2040015
Viking M	2040035
Viking L	2040014
Viking L	2040034
Viking XL	2040013
Viking XL	2040033
Golvo 8000/8008	all models



⚠ NOTE
- Before use, charge the batteries according to the instruction guide.
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.
- Old batteries are to be left at the nearest recycling station. NiMH

5.351

Beltclip HBL20
Bältesclips HBL20

Assembly Instruction
Monteringsanvisning

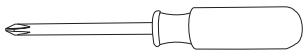
Prod. No. 21090020

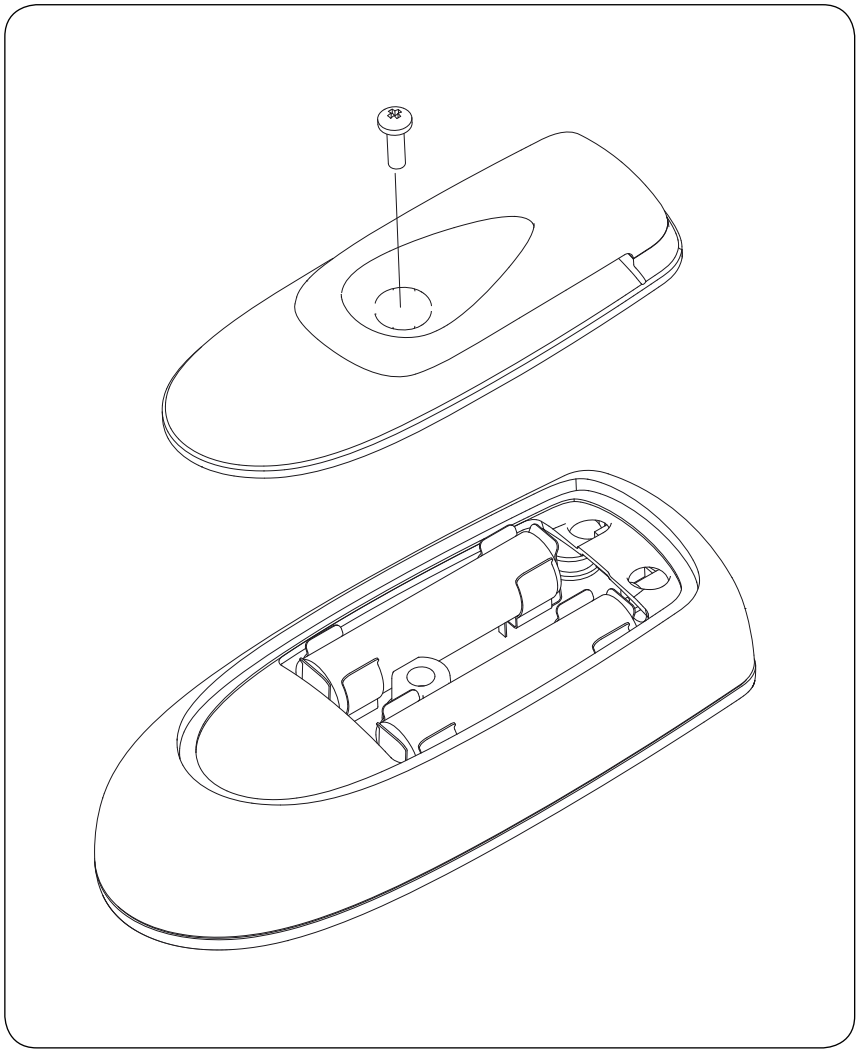
3SE650217-04
2011-03-04

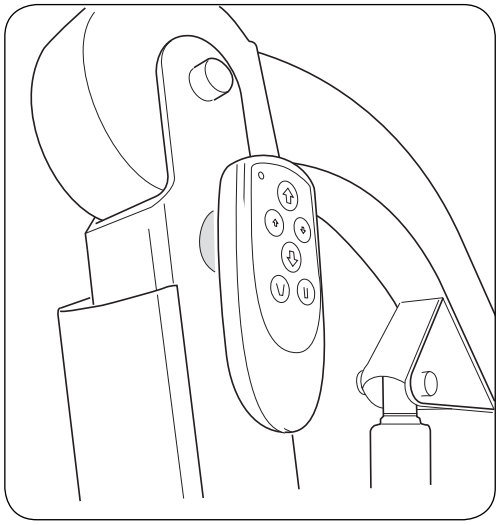
Contains:	**Qty:**
Belt Clips HBL20	1

Fits:
Wireless hand control HBL20 Prod. No. 21090020

Tools required:







⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.352
Clips with hook HBL20
Clips med krok HBL20

Assembly Instruction
Monteringsanvisning

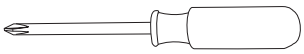
Prod. No. 21090021

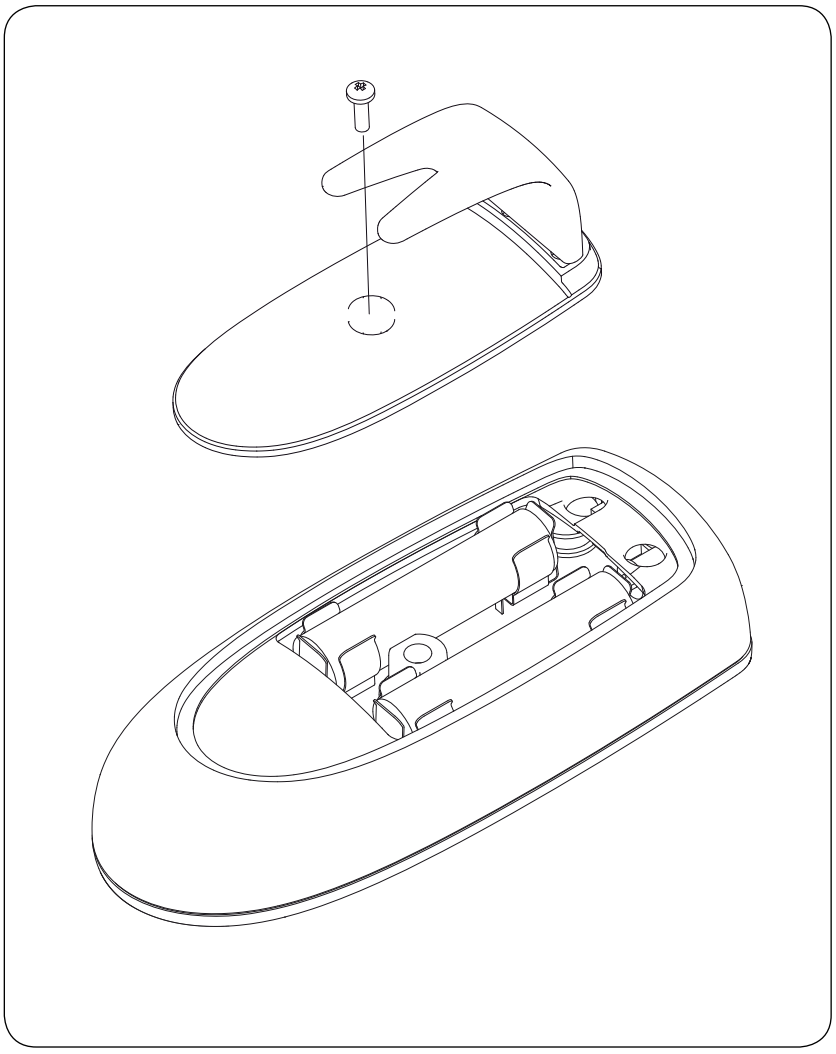
3SE650218-04
2011-03-04

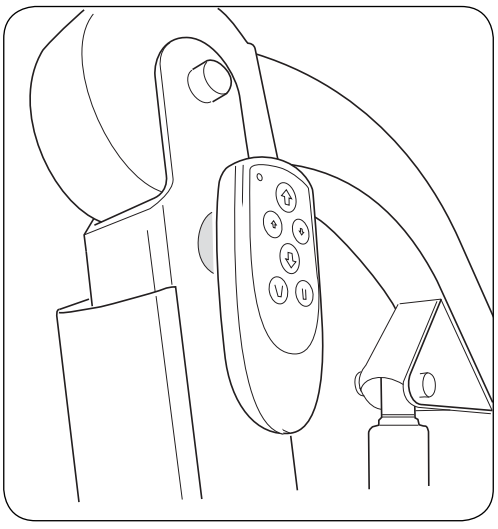
Contains:	**Qty:**
Clips with hook	1

Fits:
Wireless hand control HBL20 Prod. No. 21090020

Tools required:







⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

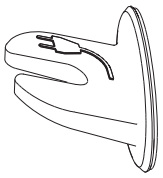
5.353
Charge cable hook
Laddkabelkrok

Assembly Instruction
Monteringsanvisning

Prod. No. 21090022

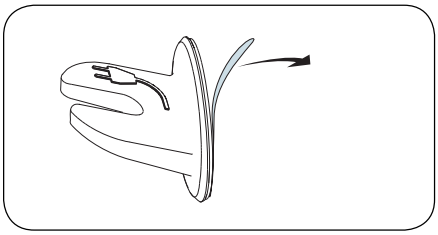
3SE650219-06
2012-09-11

Contains:	**Qty:**
Charge cable hook	10

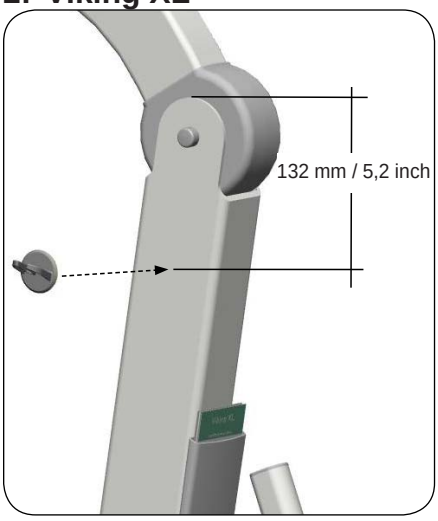


Fits:	**Prod. No.**
Golvo 8000/8008	(all models)
Liko M220	2050010
Liko M230	2050015
Viking XL	2040013 and 2040033
Viking L	2040014 and 2040034
Viking M	2040015 and 2040035

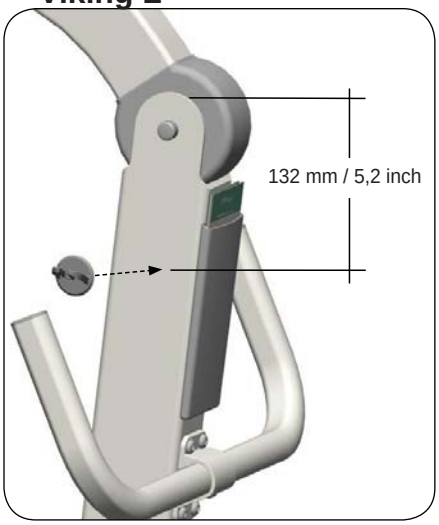
1:



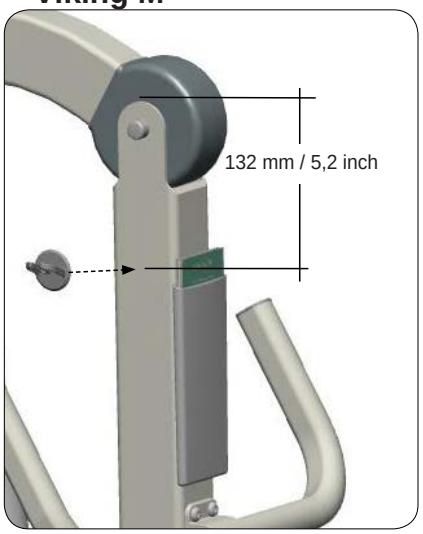
2: Viking XL



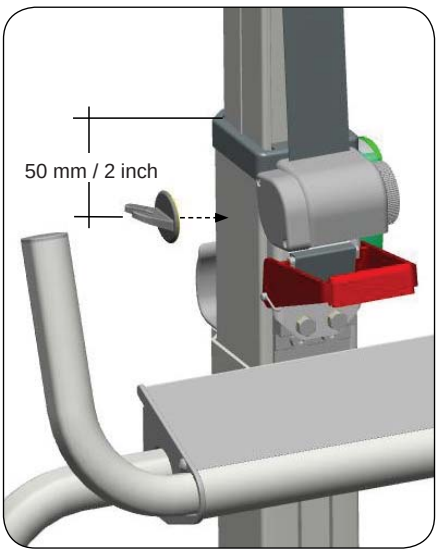
Viking L



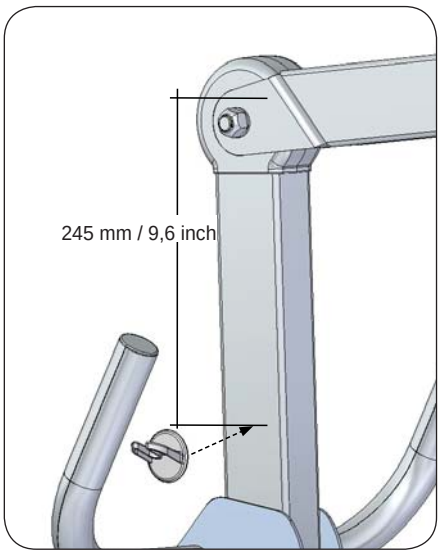
Viking M



Golvo



Liko M220 / M230



△ NOTE

- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

5.354
HandControl hanger
Handkontrollupphängare

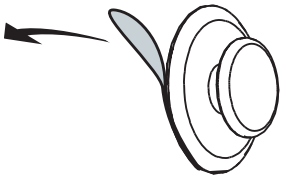
Assembly Instruction
Monteringsanvisning

Prod. No. 21090023

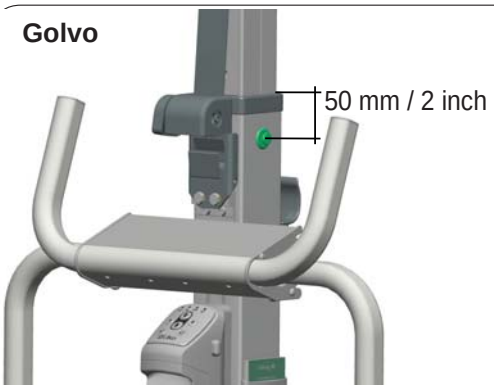
3SE650220-04
2011-03-04

Contains:	**Qty:**
HandControl hanger	10

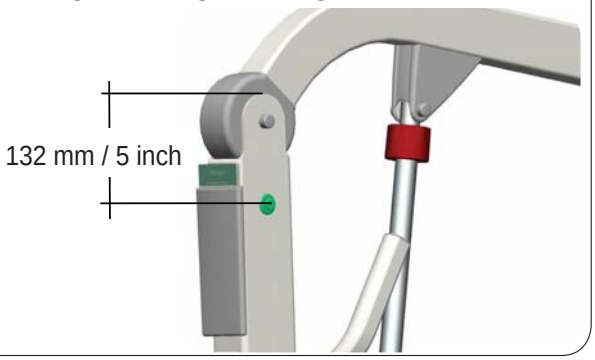
Fits:
Golvo 8000 / 8008
Viking M Prod. No. 2040015
Viking L Prod. No. 2040014
Viking XL Prod. No. 2040013



Golvo



Viking M, Viking L, Viking XL



NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

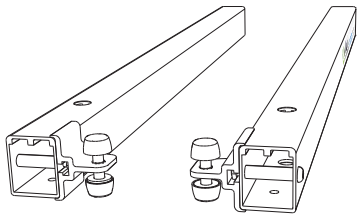
5.410
Viking M Legs
Ben vä + hö Viking M

Assembly Instruction
Monteringsanvisning

Prod. No. 20490036

3SE650259-02
2010-06-14

Contains:	**Qty:**
Leg, right Mk ll incl. link attachment and decal	1
Leg, left Mk ll incl. link attachment and decal	1
Nylon bearing 10x12x6	2
Screw M6S M10x40	2
Cover hat M10 grey U102	4
Locking nut M10 nyloc	2



Fits:
Viking M, from S/N 7100308
(S/N below 7100308; Remove link attachment from spare part and use existing link attachment on lift.)

Tools required

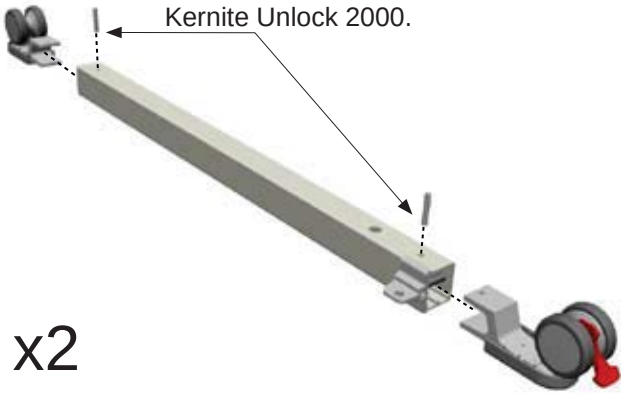
4mm

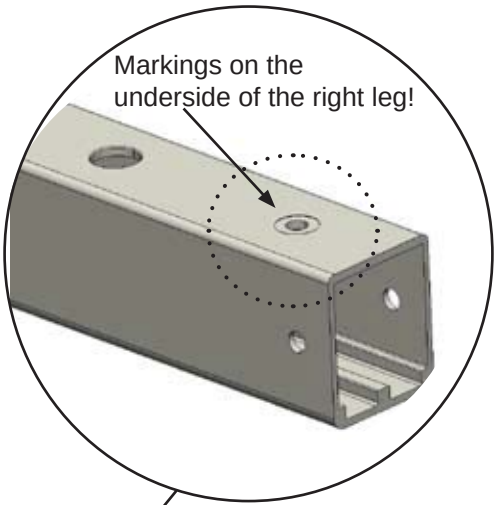
2x 17 mm

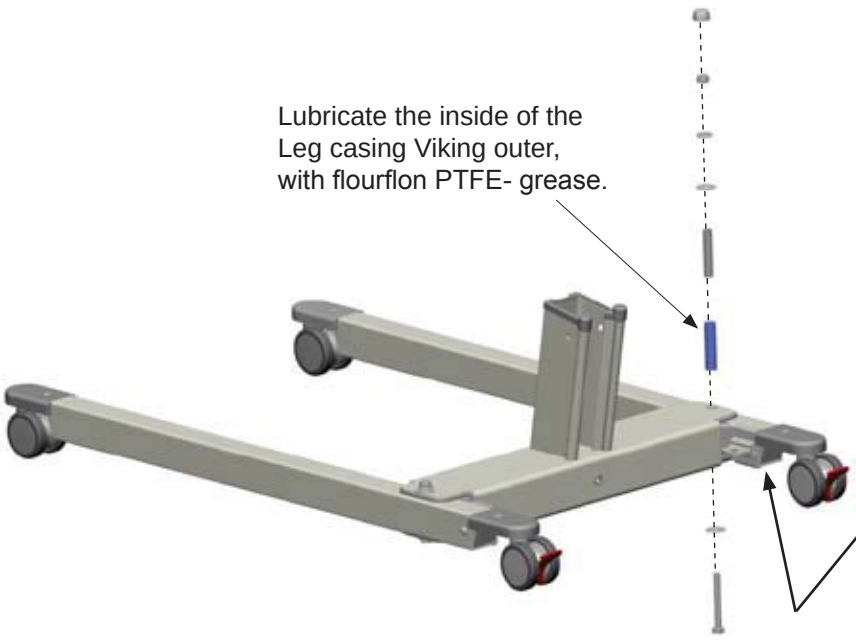
Kernite Unlock 2000

PTFE- grease

△ Before mounting; Press button for narrower base-width adjustment to end position.





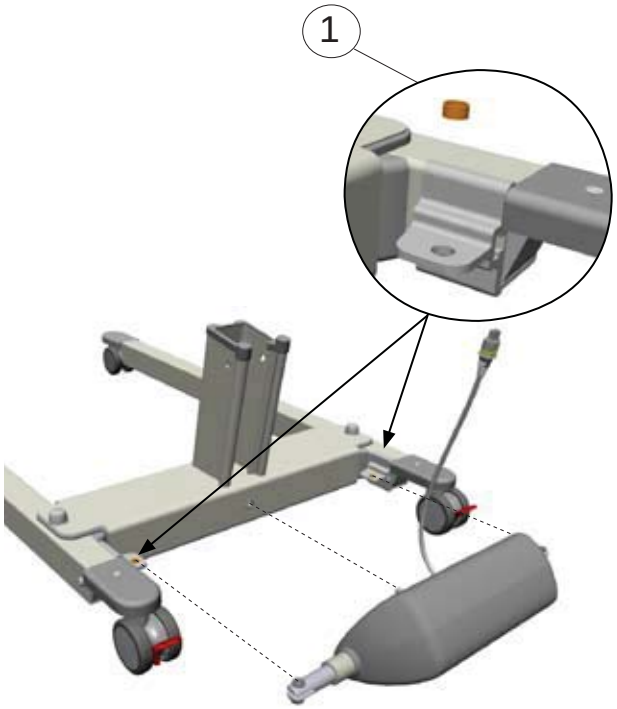


x2

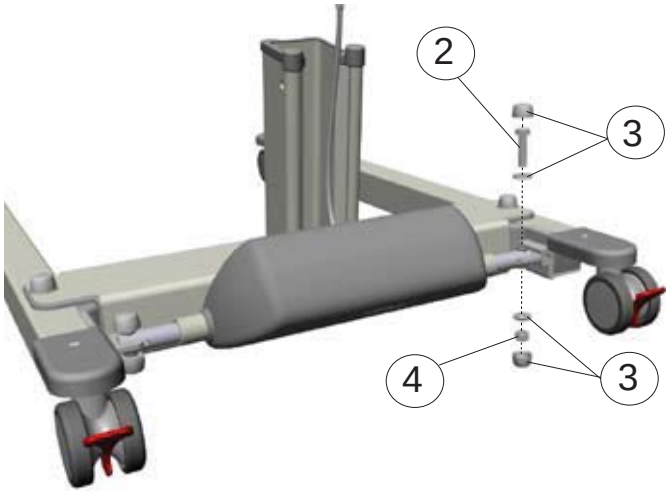
5.410
Viking M Legs
Ben vä + hö Viking M

Assembly Instruction
Monteringsanvisning

Prod. No. 20490036



Pos. No	Name:	Pce
1	Nylon bearing 10x12x6	2



Pos. No	Name:	Pce
2	Screw M6S M10x40	2
3	Cover hat M10 grey U102	4
4	Locking nut M10 nyloc	2

△ NOTE
- Make sure the legs are mounted parallel to each other
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko and using original Liko spare parts.

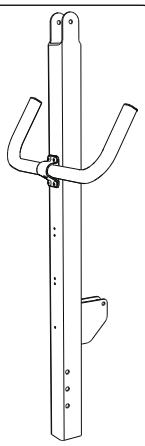
5.418
Mast Viking M
Pelare Viking M

Assembly Instruction
Monteringsanvisning

Prod. No. 20490038

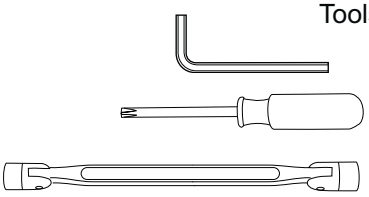
3SE650269-01
2010-04-12

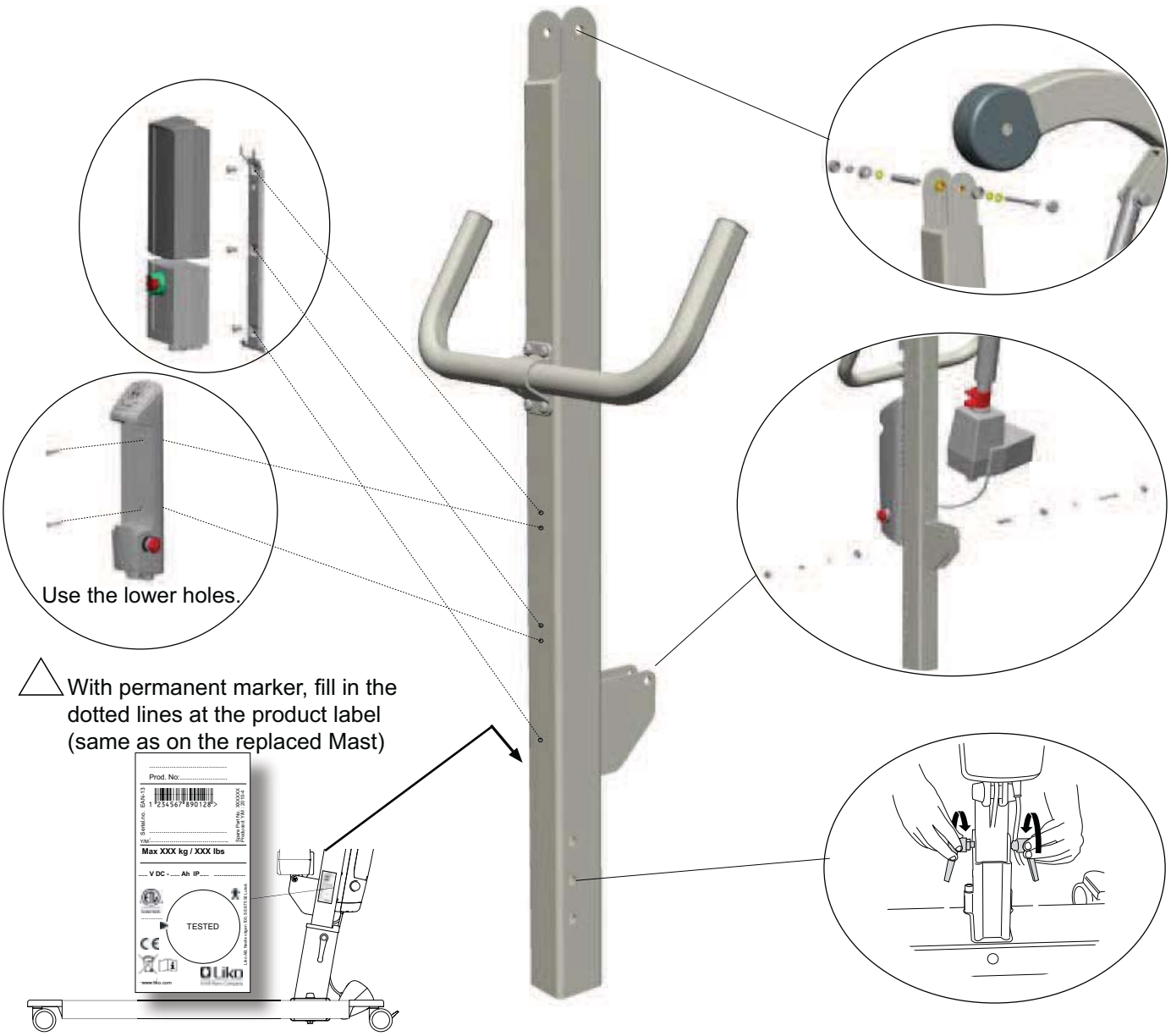
Contains: **Qty:**
Mast Viking M MKII 1
(including handle and motor attachment)



Fits:
Viking M (all models)

Tools required





With permanent marker, fill in the dotted lines at the product label (same as on the replaced Mast)

NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko and using original Liko spare parts.

5.422
Locking device CBL20
Låsanordning CBL20

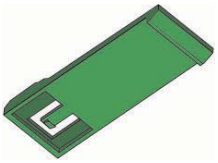
Assembly Instruction
Monteringsanvisning

Prod. No. 20090077

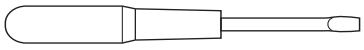
3SE640217-01
2010-05-27

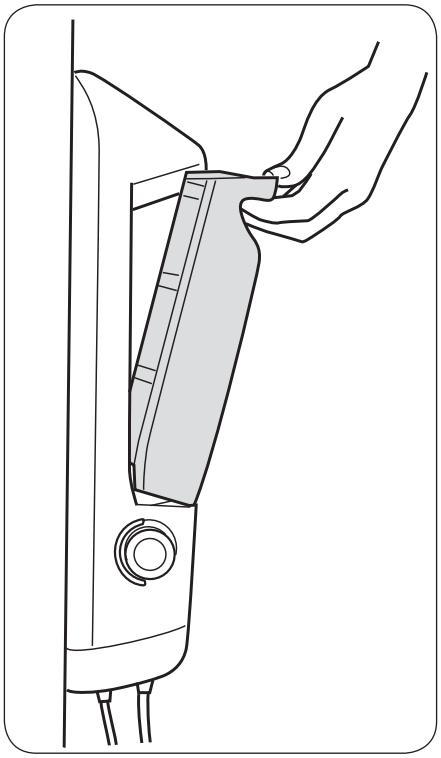
Contains: **Qty:**
Locking device 10

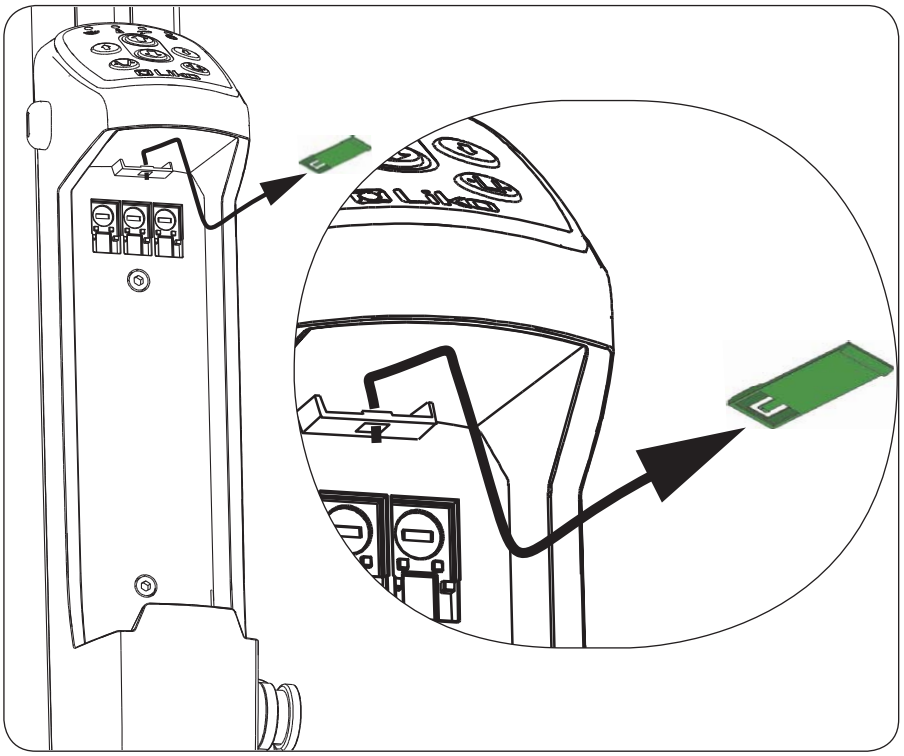
Fits:
Control Unit CBL20



Tools required:







⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

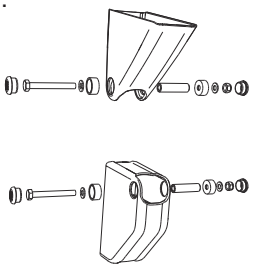
5.439
Bracket Cover
Skyddskåpor motorfäste

Assembly Instruction
Monteringsanvisning

Prod. No. 20490040

3SE650273-01
2010-10-19

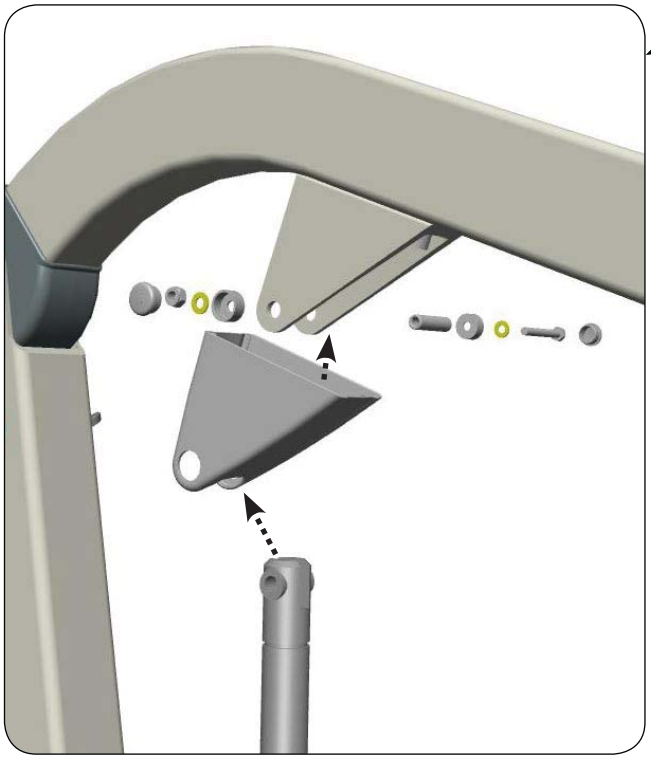
Contains:	Qty:
Bracket cover, pillar	1
Bracket cover, arm	1
Sleeve bearing Mob.38	2
Cover hat Liko bottom	4
Washer PS 6x12x1	4
Screw M6S M6x50	2
Locking nut M6 Nyloc	2
Cover hat Liko	4

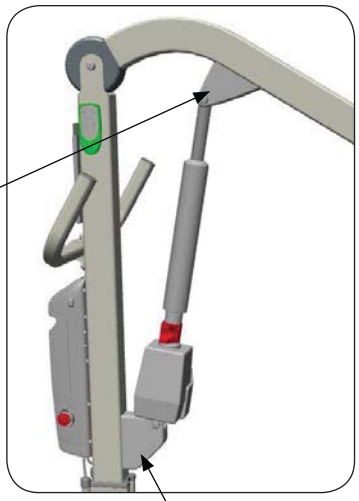


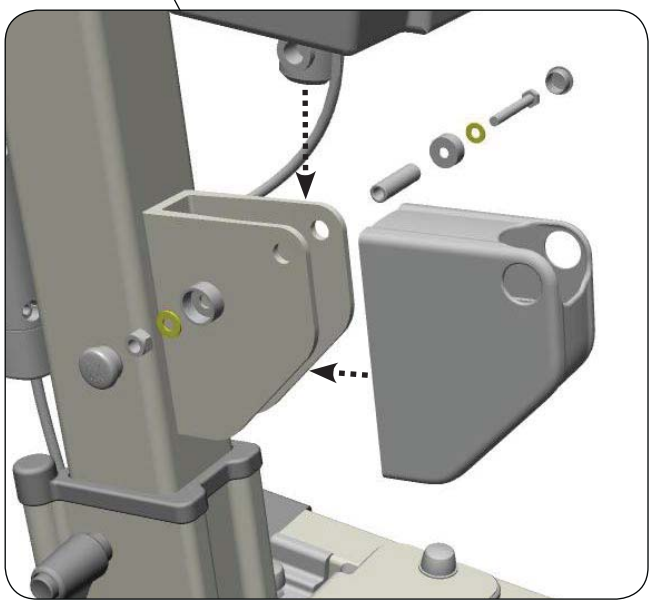
Fits:
Viking M (all models)
Viking L, Prod. No. 2040004
Viking XL (all models)

Tools required:

2 X 10 mm







⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko and using original Liko spare parts.

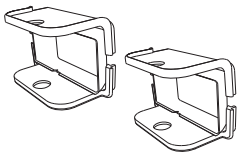
Assembly Instruction
Monteringsanvisning

Prod. No. 20490047 Leg cover L & XL
20490048 Leg cover M

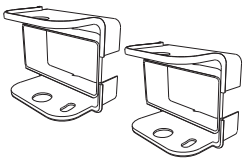
3SE650294-01
2011-04-01

Contains: **Qty:**
Leg cover, 3 pce 2

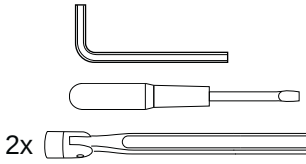
20490047 Fits:
Viking L
Viking XL



20490048 Fits:
Viking M



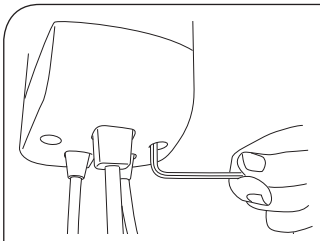
Tools required

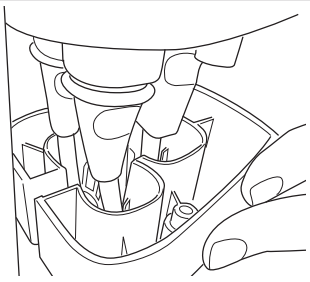


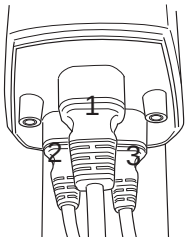
Flourflon PTFE- grease

△Before mounting; Press button for narrower base-width adjustment to end position.

Prod. No.
2040013, Viking XL
2040014, Viking L
2040015, Viking M

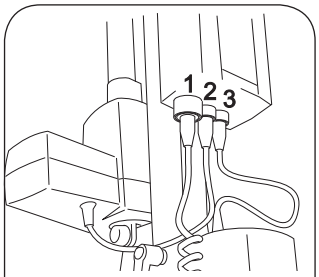






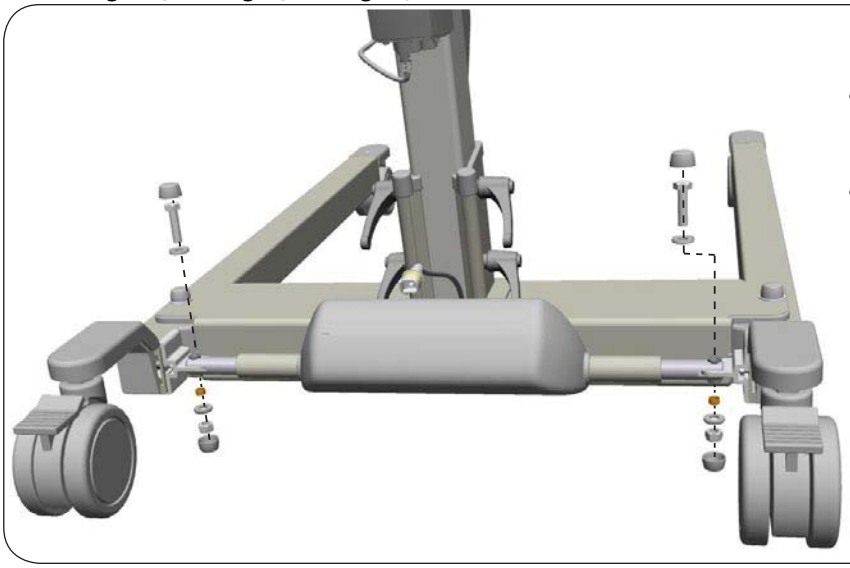
- Base motor cable; socket 3

Prod. No.
2040003, Viking XL
2040004, Viking L
2040005, Viking M



- Base motor cable; socket 3

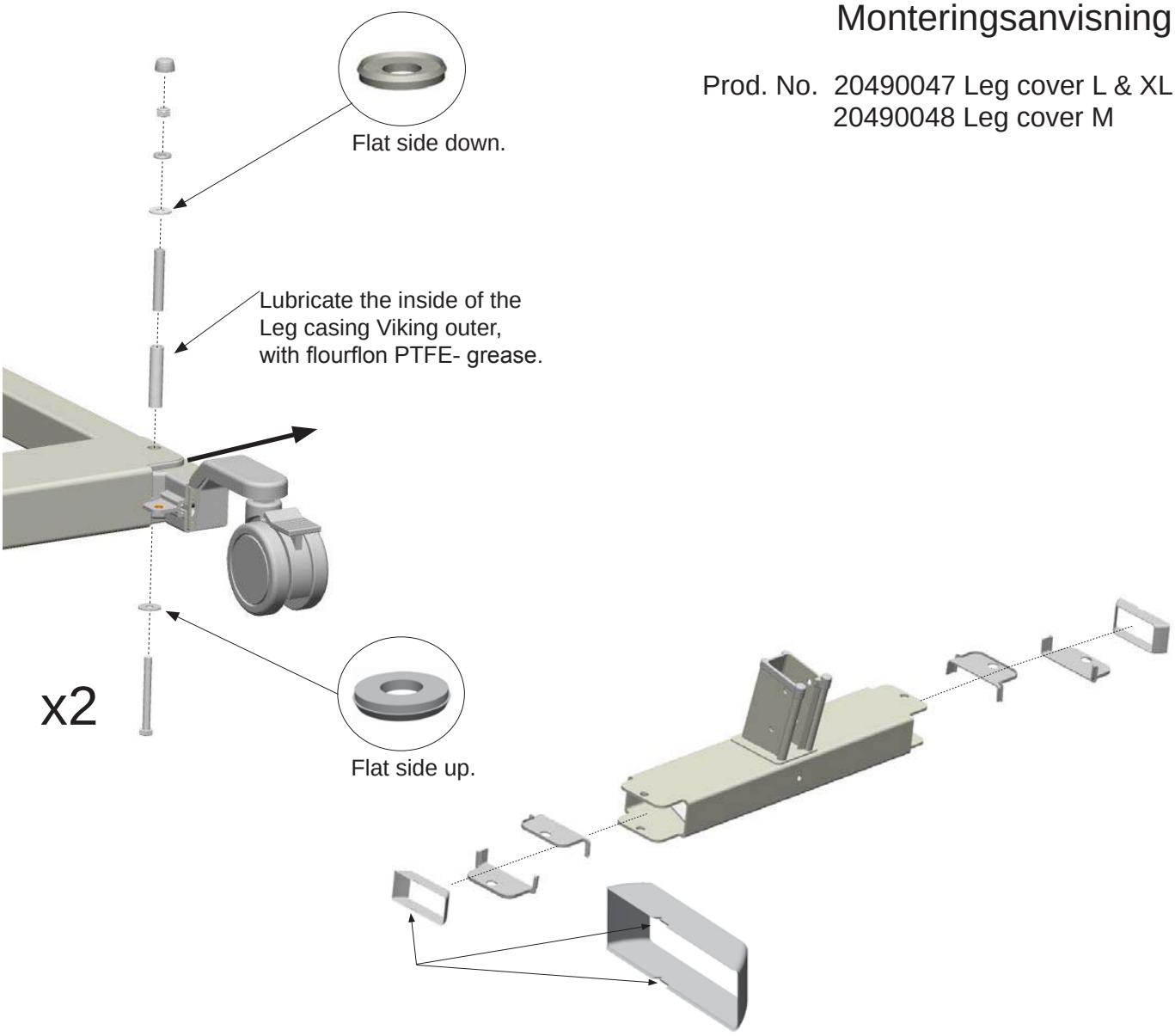
Viking XL, Viking L, Viking M, All models:



- Unfasten the base motor by removing the bolt connections.
- Remove the Base motor by pushing the motor axle in to the middle beam hole.

Assembly Instruction
Monteringsanvisning

Prod. No. 20490047 Leg cover L & XL
20490048 Leg cover M



- Finish the assembly by mounting the base motor and bolt connections.
  (Picture showing Viking XL, same assembly for Viking M and Viking L.)

⚠ NOTE
- Make sure the legs are mounted parallel to each other
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko/Hill-Rom and using original Liko spare parts.

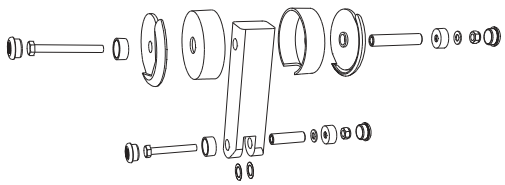
5.461
Flexlink

Assembly Instruction
Monteringsanvisning

Prod. No. 20490049

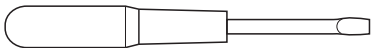
3SE650295-01
2011-04-01

Contains:	**Qty:**
Friction washer Link	2
Link Viking	1
Sleeve bearing Mob.34	1
Cover hat Liko, bottom	4
Screw M6S M6x45	1
Washer TBRB 6x12x1	2
Locking nut M6 Nyloc	2
Cover hat Liko	4
Cap I Viking	2
Cap Y Viking	2
Sleeve bearing Mob.50	1
Screw M6S M6x60	1

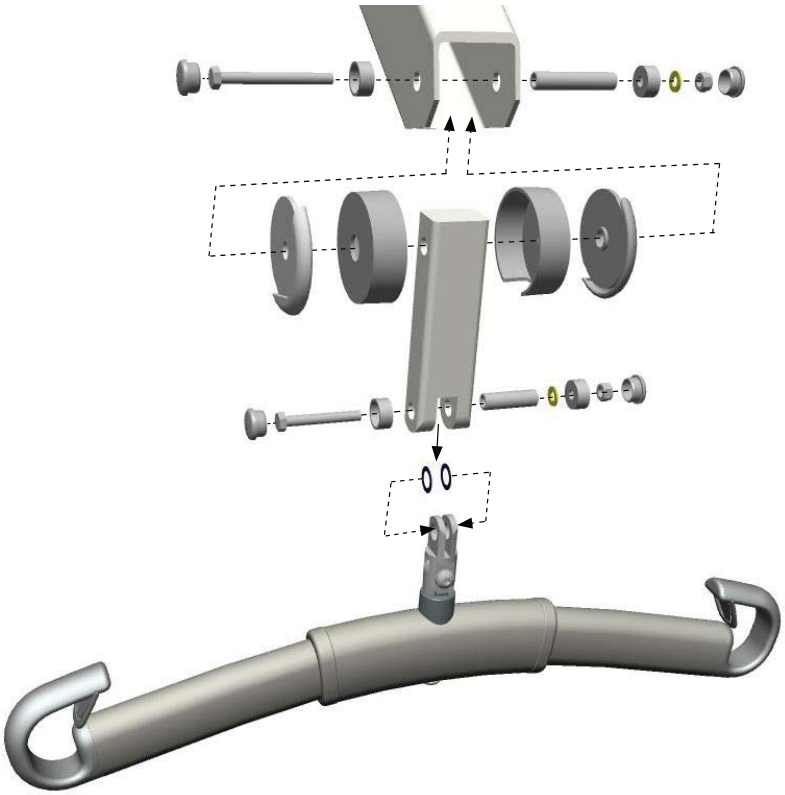


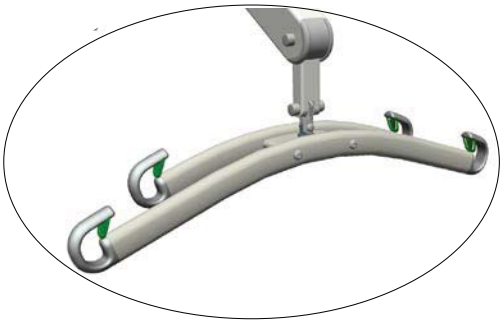
Fits:
Viking XL, Viking L, Viking M, Viking XS

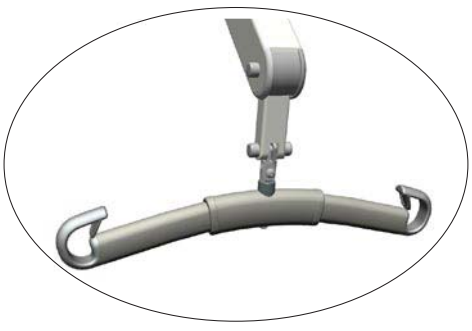
Tools required



2x 10 mm







⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Liko/Hill-Rom and using original Liko spare parts.

5.485
Fork locking attachment
Låssats hjulgaffel

Assembly Instruction
Monteringsanvisning

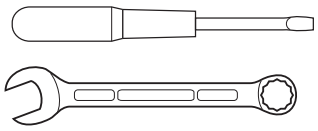
Prod. No. 20090080

3SE690208-01
2011-09-23

Contains:	Qty:
1 Front fork locking light	4
2 Nut M6LM M10 ISO	4

Fits 75 mm Wheels and 100 mm Wheels on:
Golvo
LikoLight
Viking
RollOn

Tools required



NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

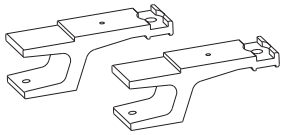
5.486
Wheel Fork
Hjulgaffel

Assembly Instruction
Monteringsanvisning

Prod. No. 20090081

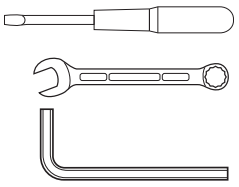
3SE690209-01
2011-09-28

Contains:	Qty:
Fork	2



Fits:	Front Wheel:	Rear Wheel:
Golvo	X	X
Golvo LowBase	-	X
LikoLight	X	X
Viking XL	X	-
Viking L	X	-
Viking M	X	X
Viking S	X	X
Viking XS	X	X
RollOn	X	X

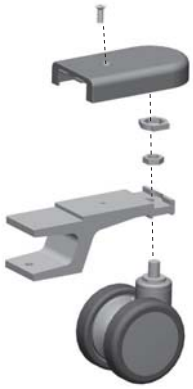
Tools required

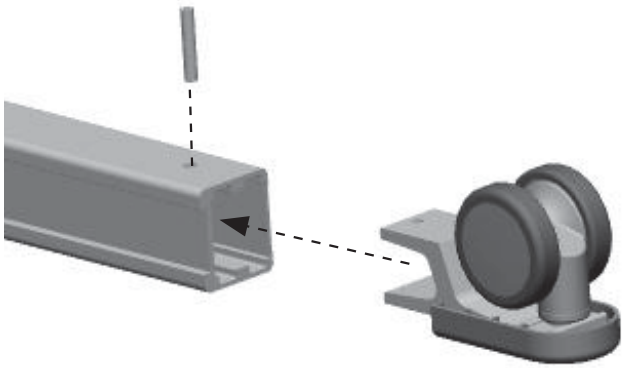


16mm

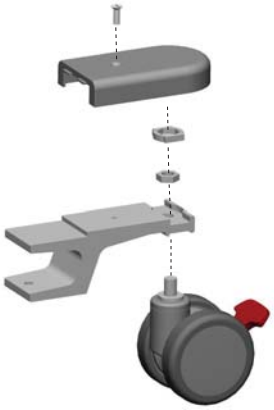
4 mm

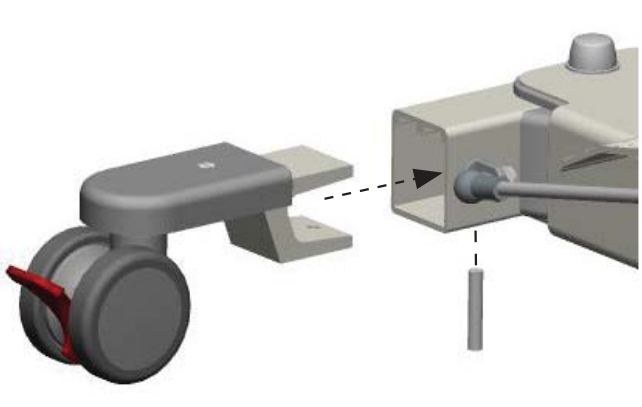
Assembly on front wheel:





Assembly on rear wheel:





⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

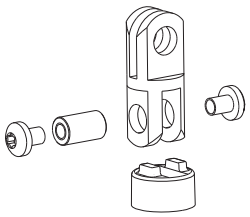
5.490
SlingBar Assembly set
Lyftbygelinfästning

Assembly Instruction
Monteringsanvisning

Prod. No. 20490052

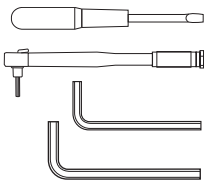
3SE690210-01
2011-09-26

Contains:	Qty:
Slingbar bolt casing R2R	1
Slingbar Adapter	1
Threaded casing M6 10x16,5	1
Screw MRT M6x8 Ezloc A2	2

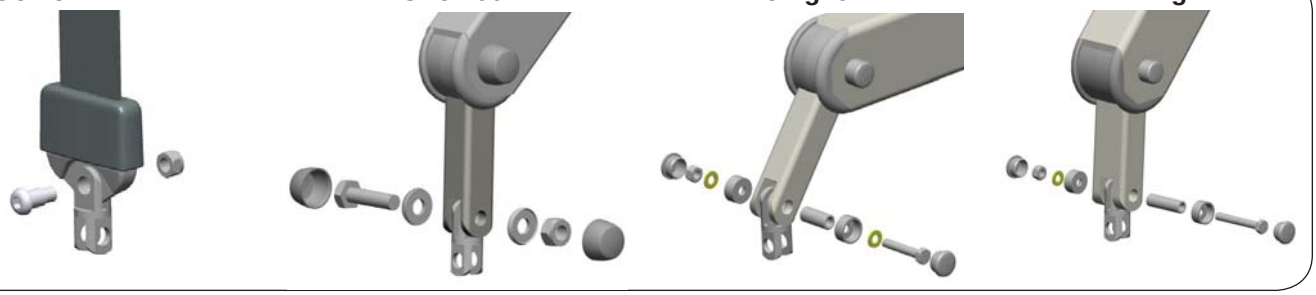


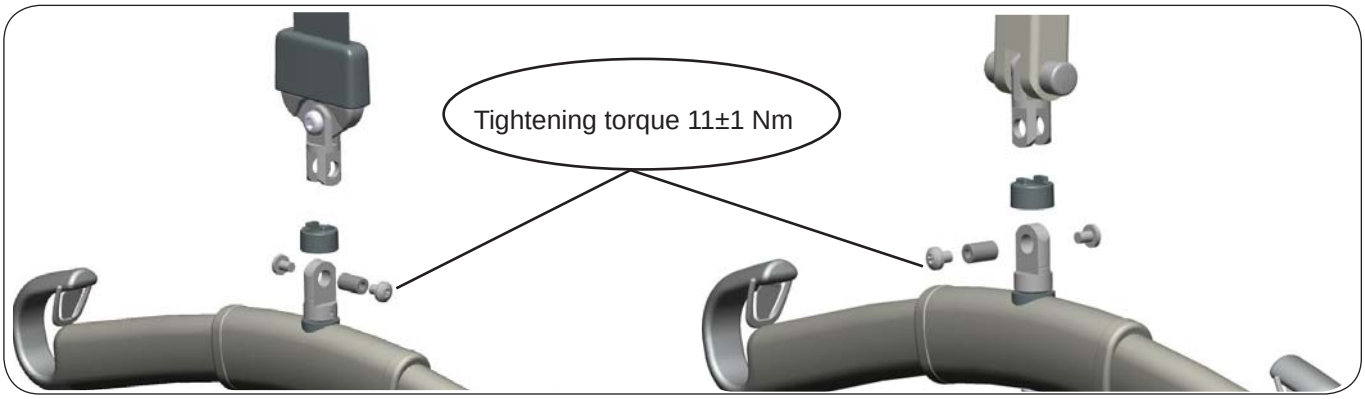
Fits:
Golvo (all models)
Uno 200
LikoLight
Viking L, M, S, XS
Universal Slingbar 350 / 450 / 600

Tools required



Golvo **Uno 200** **LikoLight** **Viking**





NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

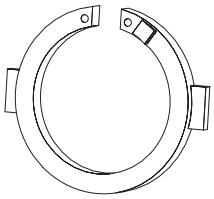
5.511
Locking Ring Hand Control CBL
Låsring för handkontroll CBL

Assembly Instruction
Monteringsanvisning

Prod. No. 20490057

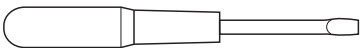
3SE690231-02
2013-01-17

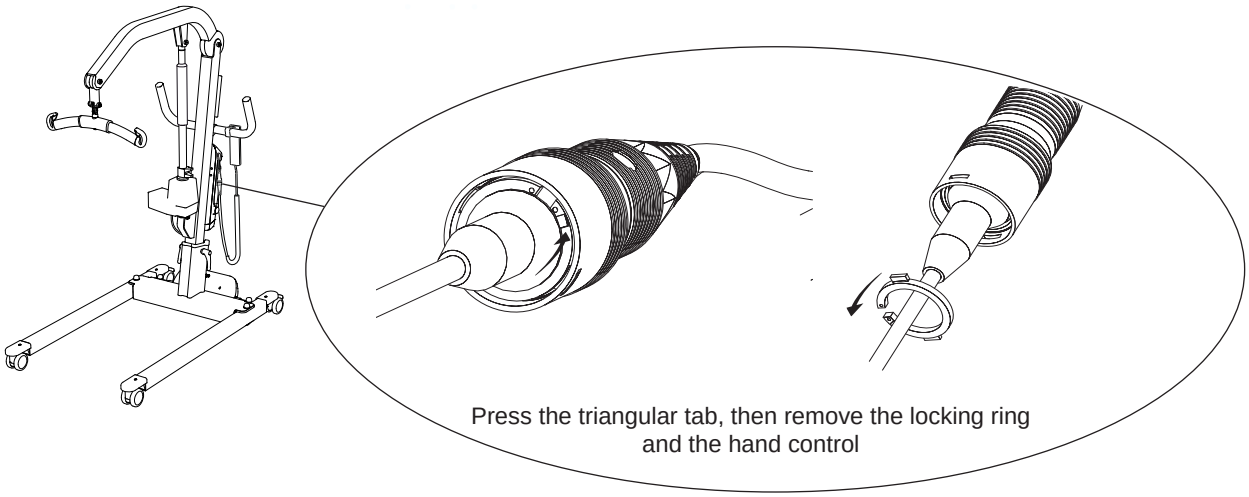
Contains:	**Qty:**
Locking Ring	10



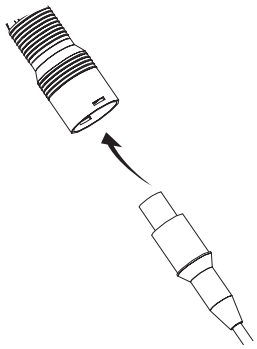
Fits:	**Prod No.**
Viking M	2040035
Viking L	2040034
Viking XL	2040033
Golvo 8000	2000034
Golvo 8008	2000035
Golvo 8008 LowBase	2000039

Tools required

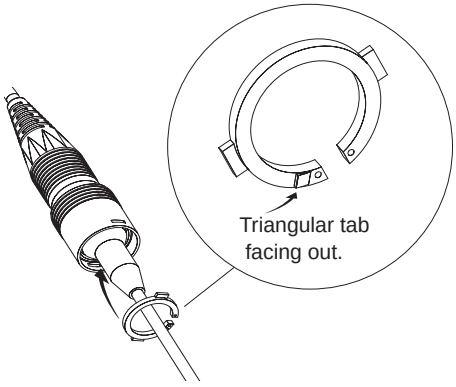




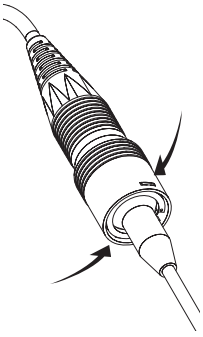
Press the triangular tab, then remove the locking ring and the hand control



Connect the Hand control.



Attach the locking ring.



Make sure the rectangular tabs at the locking ring are fixed.

⚠ NOTE
- Make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom/Liko and using original Liko spare parts.

PARAMETER Code Key

Liko Diagnostic System™ (operating data) is stored in Control Unit CBL

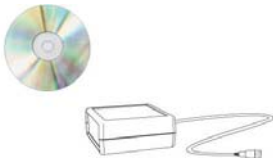
Parameter:	Information:
TAAxT [Ah]	Totally Accumulated Amphours (current x time)
TAAxTR [Ah]	Totally Accumulated Amphours, resetable (current x time) Can be reset by the manufacturer.
PAAxT [Ah]	Periodically Accumulated Amphours (current x time) Calculated continuously from the moment the lift is used until the first service.
PAKT [Months]	Periodically Accumulated Calendar time. Calculated between services.
TADT [Hours]	Totally accumulated drive time.
AAS [Starts]	Accumulated starts. The number of lifting motions counted from the moment the lift was used the first time.
ASERV [Services]	Accumulated services Number of performed service events made using LSS or LDS.
IMED [A]	Average power consumption during TADT. Overall accumulated operating time.
ALA [Charges]	Accumulatet number of started chargings.
AALA [Charges]	Accumulated number of completed chargings
AOLA [Charges]	Accumulated numbers of not completed charging. Counts each disrupted charging event.
AABT [Removals]	Accumulated number of battery replacements. Counts each battery replacement where a used battery is replaced.
AEUP [Endpos. up]	Accumulated number of end positions during lifting motion up.
AFSERV [Services]	Accumulated number of reset Service Number of “Clear Service” performed manually.
AEDWN [Endpos. down]	Accumulated number of end positions during lifting motion down.
SFSTAT	N/A (This funktion is not in use)
IDNR	Identity number of the control box.
AOLUP [Overloads]	Accumulated number of stops due to overload.
PADT [Hours]	Periodically accumulated operating time.
IMED 20 [A]	Average current consumption. Recounted for each lifting motion (up) which lasts more than 20 seconds.
ELT [Ah]	TAAxTR limit (constant) for ELT indication.
ELTCNT [Commands]	Number of ELT resets (only performed at replacement of actuator).
CLIM_1 [A]	Current limit for lifting motion (up).
CLCT [ms]	Maximum allowed time to override CLIM_1 before cut-off
CLIM_2 [A]	Current limit for widening motion (base-width adjustment).
SINTT [Months]	Indicates service intervals in calendar months.
SINTAS [Ah]	AxT limit for service event. (current x time)
CYCLET [Hours]	Cycle time is a constant for a medium driving cycle.
PAOLUP [Overloads]	Periodic accumulated number of stops due to overload.

Control Unit CBL

- The information listed above is stored in the Control Unit CBL.
- Replacing the Control Unit CBL without using the LSS may cause some data loss as this data is recordable by LSS and a computer. When data is stored in Liko database it can be retrieved if needed.
- Resetting the Service Interval using the LSS, LDS or Manually, will reset the Accumulated Amp-hours (PAAxT), Accumulated Time (PAKT), Accumulated Operating Time (PADT) and Accumulated number of stops due to overload (PAOLUP).

RESET SERVICE INTERVAL PARAMETERS 6.2

After the Periodic Inspection has been performed Service Light and Service Interval Parameters* in the Liko Diagnostic System™ has to be reset. Reset can be done using **one** of the following Service Tools/Methods:

Prod. No. 21090024	**1. Liko Service System, LSS** (Requires a computer) *Read and store the data from the Control Unit CBL into a computer. Data can also be transfered to a Liko Server. Can also reset the ELT-light (Expected Life Time). Use when Periodic Inspection or Preventative maintenance is performed.* *Service Documents for the lift can be printed. Use for tracking and and transfer data when Spare Parts are changed.*	
Prod. No. 21090016	**2. LDS Service (LDS)** *Reads the data from the Control Unit CBL. Use when Periodic Inspection or Preventative maintenance is performed.*	
-	**3. Manual Service** *Resets the Service Interval Parameters*.* ⚠***Service Interval Parameters should only be reset after a complete Periodic Inspection*** *Use the following combination of buttons on the control panel:* *A: Press and hold button 1 & 2* *B: While holding 1 & 2, press button 3, and hold all three buttons for three seconds.* *(Works from Item No: CBL20001-05 on CBL (see label on CBL)*	

INPACT ON PARAMETERS

Changes of parameters when LSS, LDS or Manuel Service reset has been used:

Parameter:	1. LSS:	2. LDS:	3. Manual Service:	Check Points in PM ***
Service Light *	Unlit	Unlit	Unlit	
TAAxT	unchanged	unchanged	unchanged	x ***
TAAxTR	unchanged	unchanged	unchanged	
PAAxT **	0	0	0	x ***
PAKT **	0	0	0	
TADT	unchanged	unchanged	unchanged	
AAS	unchanged	unchanged	unchanged	x ***
ASERV	+1	+1	unchanged	x ***
IMED	unchanged	unchanged	unchanged	x ***
ALA	unchanged	unchanged	unchanged	x ***
AALA	unchanged	unchanged	unchanged	x ***
AOLA	unchanged	unchanged	unchanged	x ***
AABT	unchanged	unchanged	unchanged	x ***
AEUP	unchanged	unchanged	unchanged	x ***
AFSERV	0	0	+1	x ***
AEDWN	unchanged	unchanged	unchanged	x ***
SFSTAT	N/A	N/A	N/A	
IDNR	unchanged	unchanged	unchanged	x ***
AOLUP	unchanged	unchanged	unchanged	x ***
PADT **	0	0	0	x ***
IMED20	unchanged	unchanged	unchanged	
ELT	unchanged	unchanged	unchanged	
ELTCNT	unchanged	unchanged	unchanged	
CLIM1	unchanged	unchanged	unchanged	
CLCT	unchanged	unchanged	unchanged	
CLIM2	unchanged	unchanged	unchanged	
SINTT	unchanged	unchanged	unchanged	
SINTAS	unchanged	unchanged	unchanged	
CYCLET	unchanged	unchanged	unchanged	
PAOLUP **	0	0	0	x ***

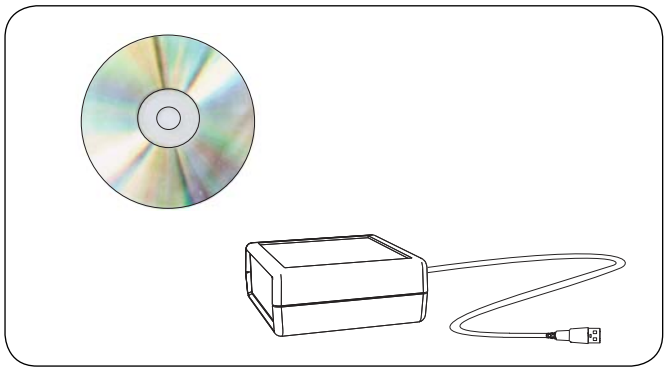
* Indicates Service Periodic Inspection interval reached.

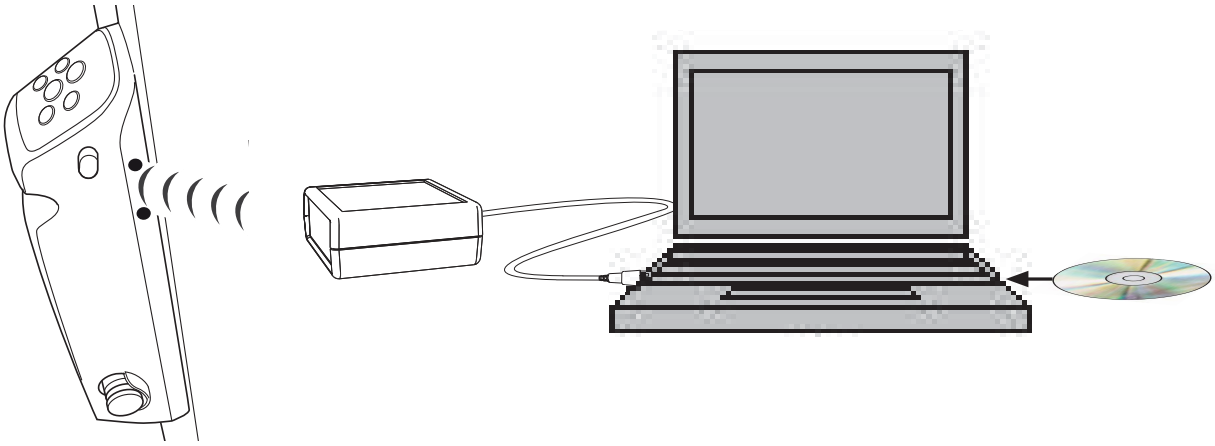
** Service Interval Parameters (the PAAxT, PAKT, PADT and PAOLUP are all used to determine Service intervals)

*** Parameters to use in the Preventative Maintenance

Liko Service System
LSS

Prod. No. 21090024





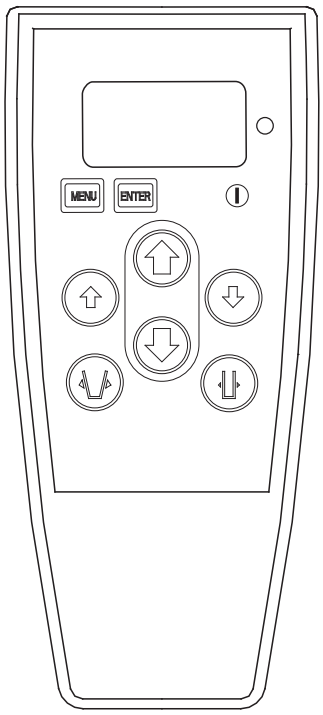
Product Description

Liko Service System is a soft ware developed to enable service technicians to conduct service in an easy way on all lifts equipped with the control unit CBL 20. It also gives the service technician the possibility to program the spare part on the field.

Detailed information can be found in the instruction guide accompanying the product.

Liko Diagnostic System - Service

LDS Service Prod. No. 21090016



Product Description

Liko lifts equipped with LDS (Liko Diagnostic System™) record and store information on how the lift is used. LDS Service can read the information stored in the Control unit CBL.

LDS Service can be used as hand control to operate Liko's IR controlled lifts.

LDS Service is specially developed for Liko's authorized service technicians to reset the Control Unit CBL service interval after completed service/periodic inspection.

Detailed information can be found in the instruction guide accompanying the product.

Periodic Inspection

Prod. No.	Viking XL	Viking L	Viking M
	2040003	2040004	2040005
	2040013	2040014	2040015
	2040033	2040034	2040035

Output (TAAxT): ☐ Ah (Prod. No. 2040013-2040035)
(Use Liko Service System or Liko Diagnostic System to read data from the CBL)

Lift type: .....
Prod. No: .....
Serial No: .....
Prod. Year: .....

Customer references

Agreement No: .....
Name: .....
Address: .....
Post code: .....

The lift must be thoroughly inspected when the Service Light at the Control Unit CBL illuminates, or at least once per year. Viking with other control unit shall be thoroughly inspected at least once per year. Inspection and service must be carried out by Hill-Rom/Liko authorized personnel. Instructions for check points, from the next page.

Check points:

		Approved	Not approved	Comments:
1	Product decal	☐	☐	.....
2	Visible damage to the lift surface finish	☐	☐	.....
Base				
3	Castor wheels, forks and fork covers	☐	☐	.....
4	Castor brakes	☐	☐	.....
5	Base covers	☐	☐	.....
6	Base opening and closing linkage	☐	☐	.....
7	Base frame castor play and levelling	☐	☐	.....
Mast				
8	Locking handles	☐	☐	.....
9	Lift arm hardware and covers	☐	☐	.....
10	Flexlink to arm hardware and covers	☐	☐	.....
11	Flexlink to slingbar hardware and covers	☐	☐	.....
12	Slingbar	☐	☐	.....
13	Mast actuator	☐	☐	.....
14	Battery and electrical cable installations	☐	☐	.....
15	Hand control	☐	☐	.....
16	Emergency stop function	☐	☐	.....
17	Emergency lowering device	☐	☐	.....
18	Control unit CBL20	☐	☐	.....
Load Testing				
19	Max. load test	☐	☐	.....
20	Mechanical emergency lowering load test	☐	☐	.....
Accessory				
21	Armrest	☐	☐	.....
Documentation				
22	Instruction guide	☐	☐	.....
23	Clear Service (CBL 20)	☐	☐	.....

Approval to use the mobile lift ☐ Approved ☐ Not approved

Not approved:
If the mobile lift has one or more check points with result “Not approved” the mobile lift must not be used.

To be actioned:
Actions according to the “Instructions for the check points” should be performed immediatley. After performed actions sign below. If anything is unclear or if you have questions, please contact Hill-Rom/Liko or your local Hill-Rom/Liko representative. Contact information is to be found at www.liko.com.

Inspection performed by: _____ **Date:** _____

Final approval by: _____ **Approval date:** _____

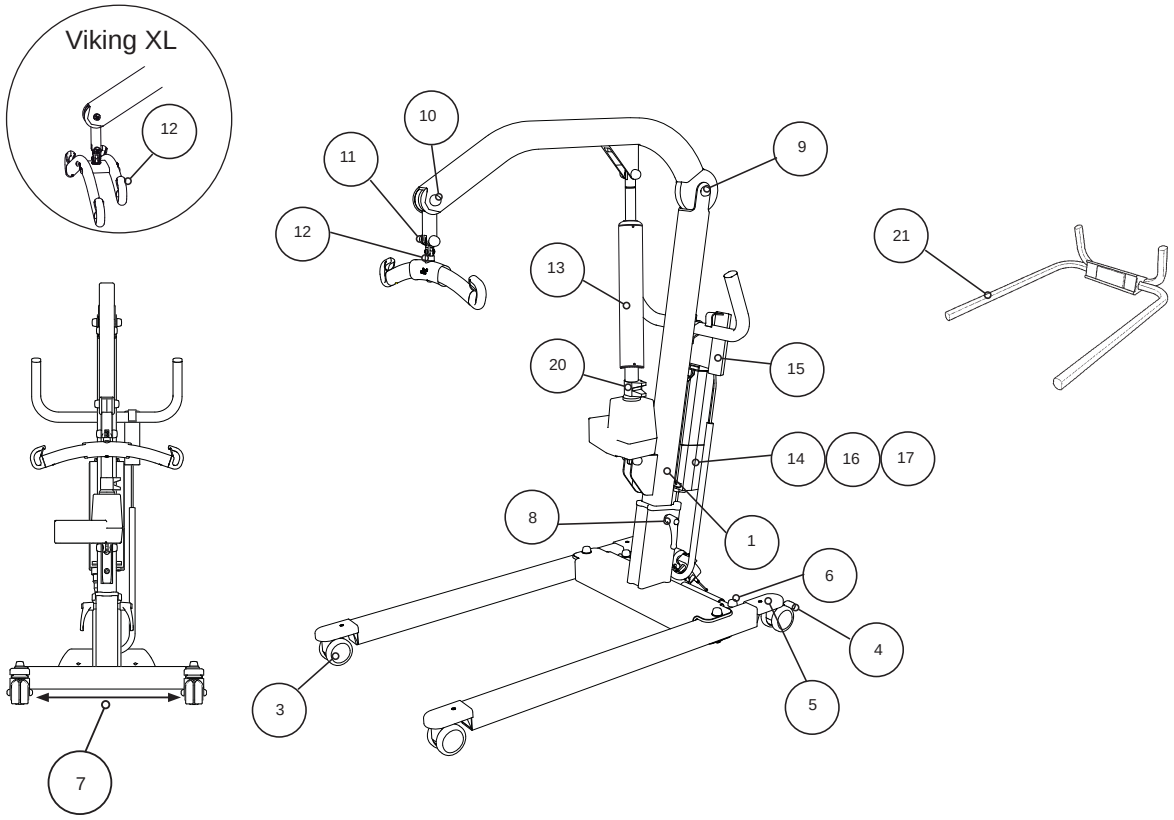
Next inspection: _____

Inspection performed in accordance with ISO 10535:2006 Annex B- Periodic inspection

2012-11-05

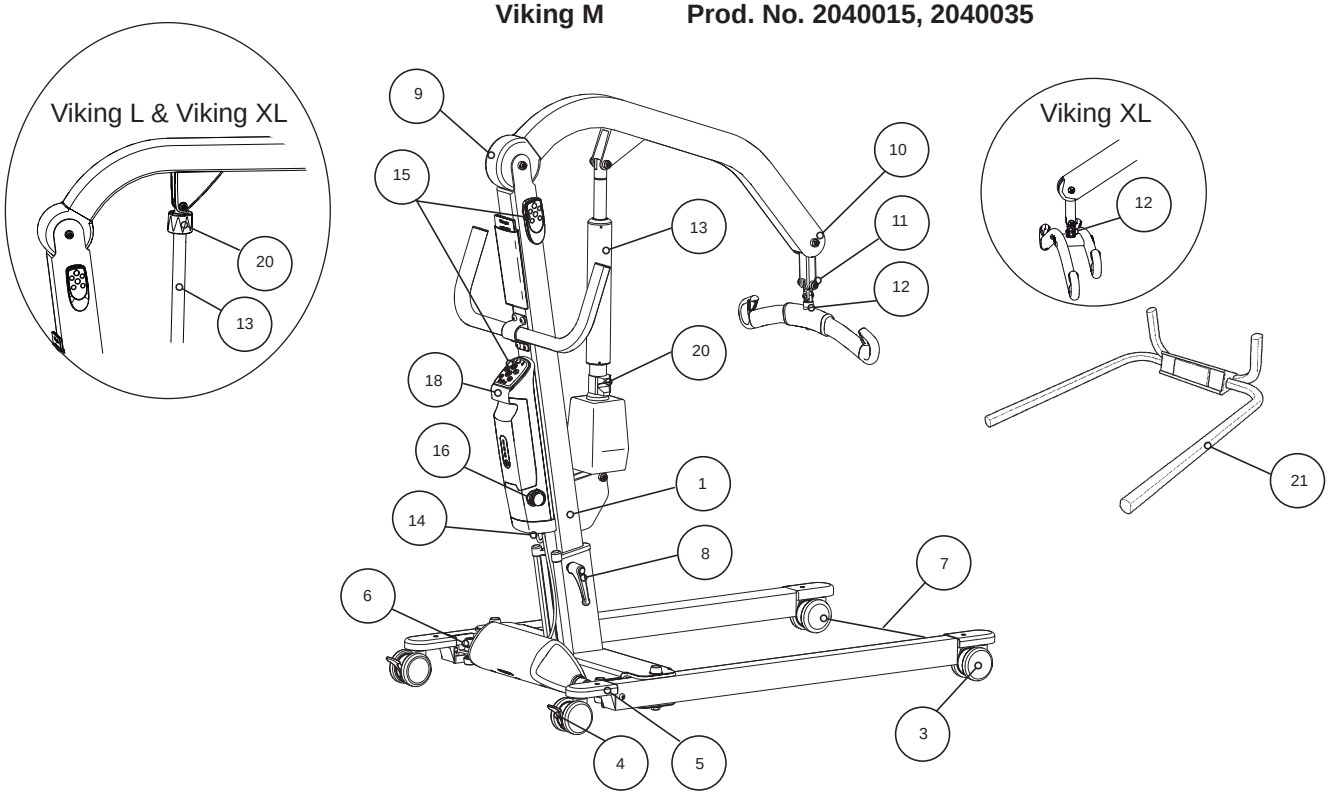
Check points

Viking XL **Prod. No. 2040003**
Viking L **Prod. No. 2040004**
Viking M **Prod. No. 2040005**



Check points

Viking XL **Prod. No. 2040013, 2040033**
Viking L **Prod. No. 2040014, 2040034**
Viking M **Prod. No. 2040015, 2040035**



Instructions for the check points

1 Product decal
- Verify presence of mast decal with model type and serial number.

2 Visible damage to the lift surface finish
- Check for scratches, dents, deformities or unusual surface wear.

3 Castor wheels, forks and fork covers
- Roll the lift, unloaded and with load, along the floor. Check to ensure that all castors roll and turn freely.
- Verify that the castor fasteners are tight. There should not be any play between the fork and the castor nut.
- Remove the front fork cover and inspect safety casing and bolt channel for cracks or fractures.

4 Castor brakes
- Lock the brakes. Make sure the wheels do not turn and the castor housing does not swivel when the lift is pushed.

5 Base covers
- Verify that the protective plastic covers are secure.

6 Base opening and closing linkage
- Inspect the linkage between legs and base motor. Make sure there is no cracks or deformations at the legs.
- Inspect the plastic protective cover shell for cracks, deformation or gaps.
- Open and close the base to maximum and minimum dimensions.
- Listen for particular noises and vibrations.

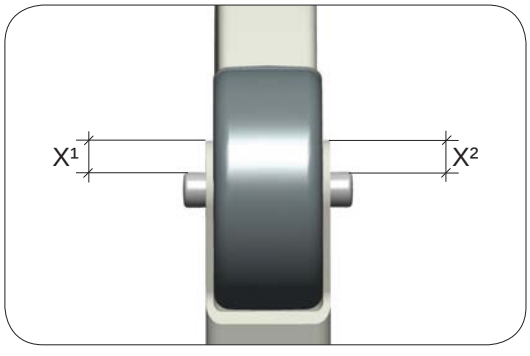
7 Base frame castor play and levelling
- Manually open and close legs at the front castors to measure wheel play. Base width wheel play should not exceed 35mm / 1,38 Inch total.

8 Locking handles
- Loosen & re tighten locking handles. Verify that threads are not damaged or binding.

9 Lift arm hardware and covers
- With the lift in it's lowest position, manually raise the lift arm. Verify that the shaft lowers and raises freely. If the arm is binding, the mounting screw is to tight.
- Inspect the plastic protective cover shells for cracks, deformation or gaps.
- Make sure the holes in the mast are not deformed on:

Product	Product No.	Up to S/N:
Viking XL	2040003	801 999
Viking L	2040004	7 200 795
Viking M	2040005	7 106 200

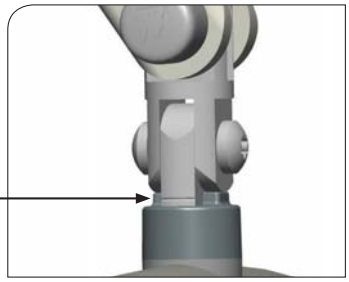
Verify that the diameter of the holes in the mast (where the arm and mast is connected) is not bigger than 12 mm/0,47 inch,
It can be done by measuring the distance from cover hat, to top of the"ear". The length should be the same on each side (X^1=X^2)±1 mm.



10 Flexlink to arm hardware and covers
- With the slingbar hanging in it's lowest position, manually raise the slingbar and flexlink arm.
- Verify that the flexlink arm lowers and raises freely. If the flexlink is binding the screw is too tight.
- Inspect the plastic protective cover shells for cracks, deformation or gaps.

11 Flexlink to slingbar hardware and covers
- With the slingbar hanging in it's lowest position, manually pivot the slingbar side-to-side. Verify that the flexlink arm lowers and raises freely. If the flexlink is binding, the mounting screw is too tight.
- Verify that hardware covering plastic caps are secure.
- If no accessories is attached, verify that the slingbar is assembled directly to the flexlink.

Instructions for the check points



12 Slingbar

- Inspect visually to ensure that the slingbar is free from any scratches, sharp edges or deformities.
- Check that the unit rotates freely on its bearings.
- Make sure the lower slingbolt has a mark, as the picture shows. If not, the slingbar must be replaced.
- Make sure that both latches are mounted and fall back against the body of the slingbar.

13 Mast actuator

- Verify that the upper and lower actuator fasteners to the mast are tight.
- Visual inspection of tubes, back fixture and piston rod eye.
- Check of abnormal noise.
- If the lift is equipped with Outer tube: Pull the Outer Tube to the top and bottom (with the lift arm in its highest position). Make sure the Outer Tube not get stuck in any position.
- Check of electric end stop

Prod. No. 2040003-2040005: By using test box 21090014 UK or 21090015 US

Prod. No. 2040013-2040015 and 2040033-2040035: Run the lift all the way up and down. Verify that the Indicator lamp for overload (orange light) not lights.

14 Battery and electrical cable installations

- Verify that all cables are properly inserted. Re-insert if uncertain.
- Make sure the charge cable hook is mounted at the mast.

Prod. No. 2040003-2040005: Verify battery charge (recharge battery or test with Prod. No. 2101100 Battery tester with diodes).

Prod. No. 2040013-2040015 and 2040033-2040035: Inspect that the cable cover is mounted correctly. Verify battery charge. During charging the lights shall shine alternatively (orange, orange, green). Completed charging is indicated by a flashing green light.

15 Hand control

- With the emergency stop out, verify that all functions on the hand control are working.

Prod. No. 2040013-2040015 and 2040033-2040035: With the emergency stop out, verify that all functions on the operation panel are working.

16 Emergency Stop function

- Press the emergency stop button. With the emergency stop pressed in, verify the lift does not operate with the hand control buttons.
- Turn the red emergency button in the direction of the arrows. Verify the button releases from the locked position into the raised, open position.

17 Emergency lowering device (only on Prod. No. 2040003-2040005)

- With the emergency stop out, verify that the electrical emergency-lowering device functions.

18 Control unit CBL 20 (Prod. No. 2040013-2040015 and and 2040033-2040035)

- With the emergency stop out, verify the function of the electrical emergency-lowering device at the operation panel.

19 Max. load test

- Run the lift with maximum load, all the way up and down.

Max load	kg	lbs
Viking M	205	450
Viking L	250	550

Instructions for the check points

Viking XL	300	660

- Run the base in and out with maximum load.
- Make sure all four wheels have contact with the floor.
- Listen for peculiar noises and vibrations.

20 Mechanical emergency lowering load test

- Raise with maximum load (see table above) and with (50 kg/110 lbs) until the arm is parallel to the ground.

Prod. No. 2040003-2040005, 2040015, 2040035: Lift red emergency handle on the actuator upwards and hold, verify that the load lowers.

Prod. No. 2040013, 2040014, 2040033, 2040034: Manually turn the red actuator collar in the direction of the arrows to lower.

21 Armrest (accessory)

- Verify that both arms rotate freely and hang vertically when not in use.
- Rotate arms to raised position. Perform a load test of the armrest with (40 kg/88 lbs).

22 Documentation

- Verify that the Instruction guide is provided.

23 Clear Service (CBL 20)

- Only products with Control Unit CBL20 (Prod No 2040013 - 2040015 and 2040033-2040035)

Service indicator (orange light)
- Illuminates when service is needed.

When the Periodic Inspection has been performed, reset the service indicator with LSS, LDS or Manual Service according to instructions “Reset Service Interval Parameters” in the Service Manual.

Liko
A Hill-Rom Company

Prod. No.	Viking XL	Viking L	Viking M
	2040003	2040004	2040005
	2040013*	2040014*	2040015*
	2040033*	2040034*	2040035*

* Lift equipped with Control Unit CBL

Lift type: .....
Product No: .....
Serial No: .....
Prod. Year: .....

Customer references

Agreement No: .....
Name: .....
Address: .....
Post code: .....

Use Liko Service System (LSS) or Liko Diagnostic System (LDS) to read data from lifts equipped with Control Unit CBL.
If you don't have the LSS, write down the values in the columns below. (With LSS you can store data)

TAAxT	Ah	AABT	Removals
PAAxT	Ah	AEUP	EposUp
AAS	Starts	AFSERV	Services
ASERV	Times	AEDWN	EposDn
IMED	mA	IDNR	
ALA	Charges	AOLUP	OverLoads
AALA	Charges	PADT	Hours
AOLA	Charges	PAOLUP	OverLoads

To ensure maximum life cycle, Preventative Maintenance should be carried out according to how much the lift has been used TAAxT (Totally Accumulated Amphours) or according to years in use, see table below. TAAxT can only be read from lifts equipped with Control Unit CBL. Inspection and service must be carried out by Hill-Rom/Liko authorized personnel.

Check points:

Maintenance according to used TAAxT (Ah):

Viking XL: (with Control Unit CBL)		204		408		612		816	1020
Viking L: (with Control Unit CBL)		182		364		546		728	910
Viking M: (with Control Unit CBL)		140		280		420		560	700

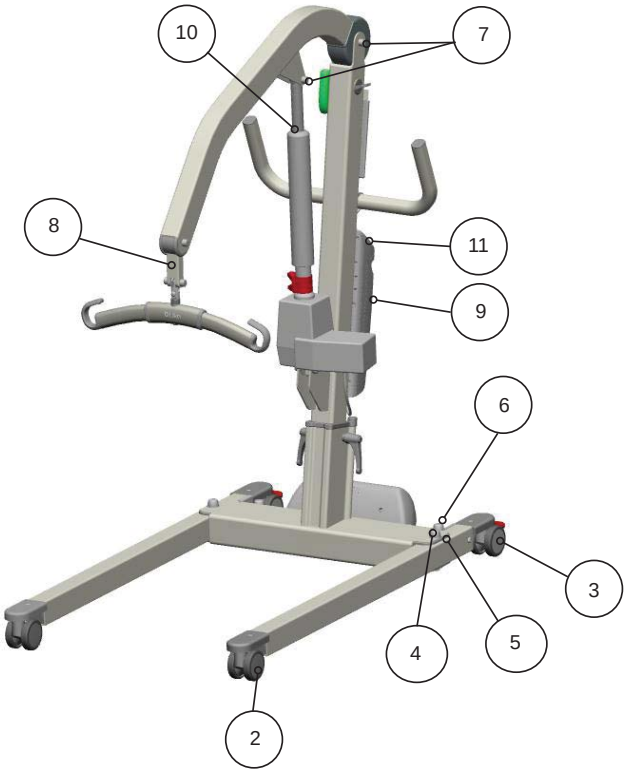
Maintenance according to years of use:	1	2	3	4	5	6	7	8	9	10
1 Surface treatment	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2 Front castors	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3 Rear castors / brakes	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4 Pivot bolts	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5 Base opening and closing linkage	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6 Base motor linkage	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7 Lift arm	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8 Flexlink / Lift arm joint / Slingbar bolt	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
9 Battery.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
10 Actuator	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
11 Control Unit CBL	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Lubricate with PTFE or silicon grease

When maintenance is performed; mark specified square with "X"
When part is replaced; mark specified square with "R"

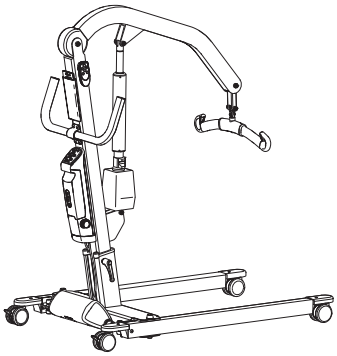
Interval/Month: _____ Date: _____ Serviced by: _____

Check points



Instructions regarding the check points

1 Surface treatment

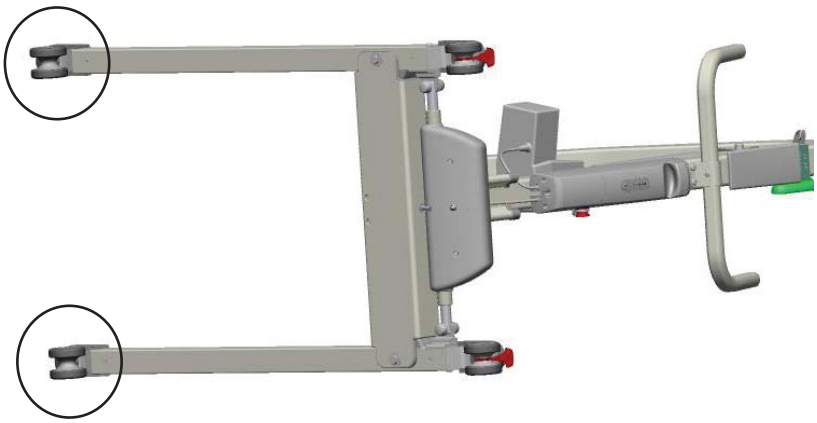


Visually inspect the lift for external damage or wear.

If needed, clean the patient lift with warm water or ethanol.
Warning! Do not use chemicals containing phenol or chlorine, since the aluminium parts may be damaged.

Instructions regarding the check points

2 Front castors



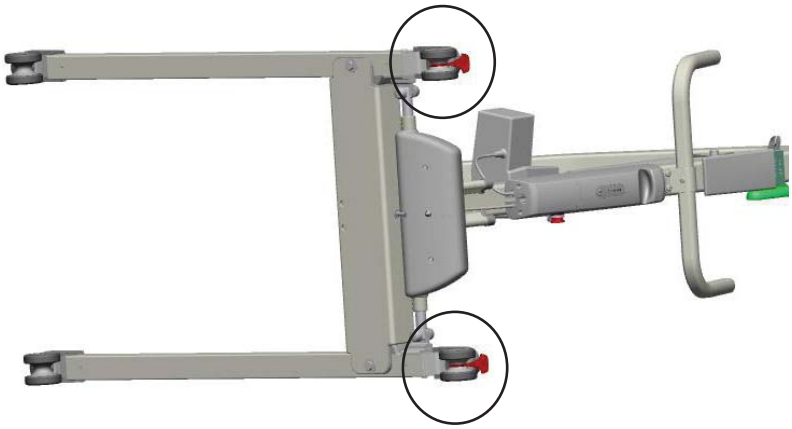
Check and clean front castors. If wheels are in poor condition, replace them. (For Spare Part No, see the Spare Parts List)

	Viking XL	Viking L	Viking M
Front castors needs to be replaced after:	**1020 Ah**	**910 Ah**	**700 Ah**
or			
Replace according to years in use:	**10**	**10**	**10**

3 Rear castors / brakes

Viking M

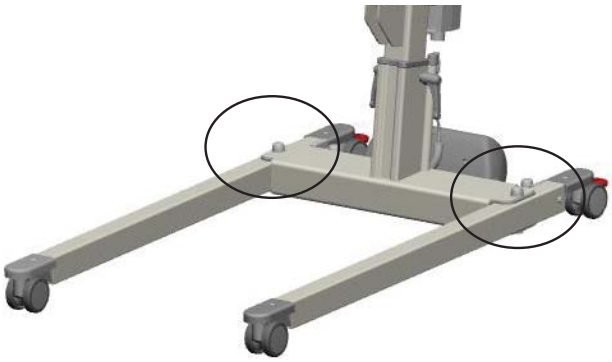
Viking L & XL

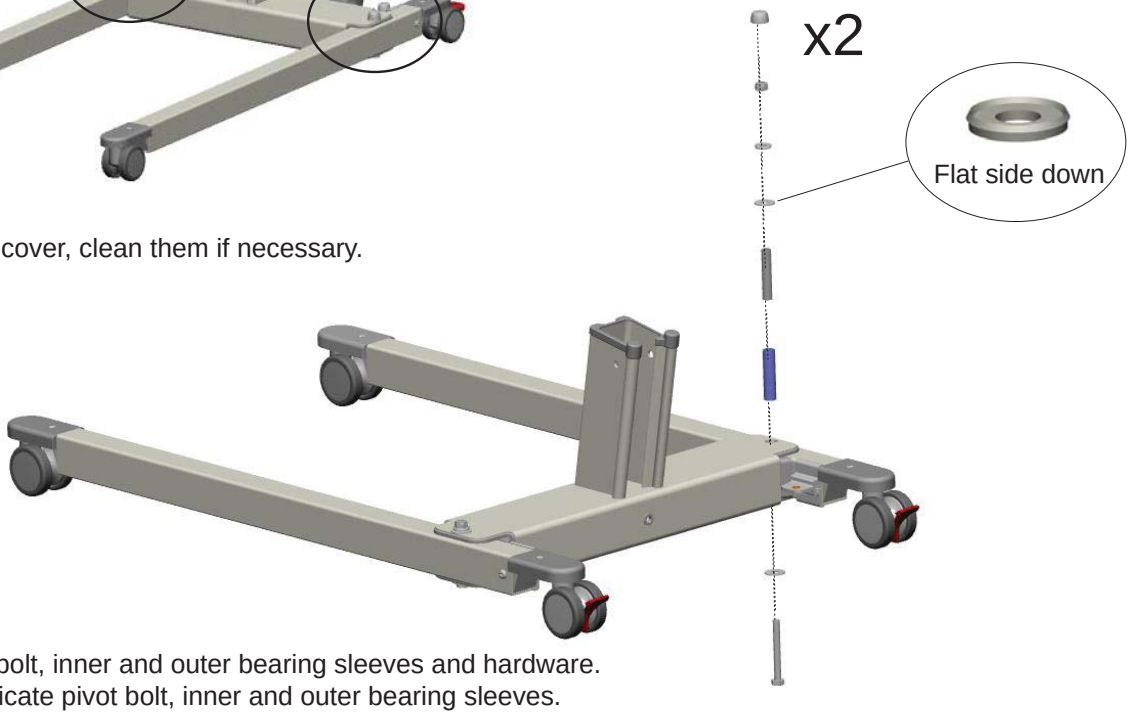


Check and clean rear castors. If wheels are in poor condition, replace them. (For Spare Part No, see the Spare Parts List)
Check the brakes. They should lock in all directions.

Instructions regarding the check points

4 Pivot bolts





Inspect plastic cover, clean them if necessary.

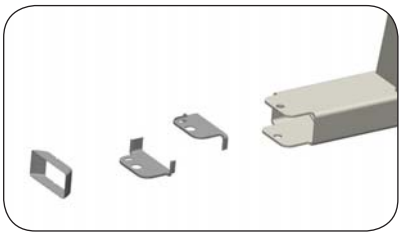
Remove pivot bolt, inner and outer bearing sleeves and hardware.
Clean and lubricate pivot bolt, inner and outer bearing sleeves.

5 Base opening and closing linkage

Remove hardware covers from middle beam and actuator.

Remove leg from middle beam and actuator.
(a) Remove pivot bolt, inner and outer bearing sleeves and hardware.
(b) Remove link arm cover, bolt and nut.

Remove plastic covers and inspect middle beam edges for burrs. File smooth if required.



Clean and inspect the three pieces of plastic cover. Replace if cracked or deformed. (For Spare Part No see the Spare Parts List)

Clean, lubricate and reassemble pivot bolt, bearing sleeves and hardware.

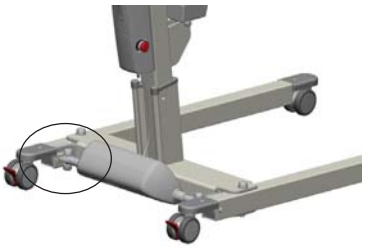
Tighten pivot bolt and apply plastic hardware covers.

Reconnect actuator to link arm. Apply plastic hardware covers.

	Viking XL 612 Ah	Viking L 546 Ah	Viking M 420 Ah
Leg covers needs to be replaced after:			
or			
Replace according to years in use:	**6**	**6**	**6**

Instructions regarding the check points

6 Base motor linkage

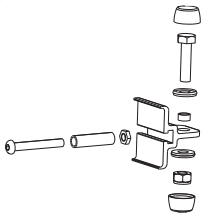


Remove link arm cover, bolt and nut.

Clean, lubricate and reassemble pivot bolt, bearing sleeves and hardware.

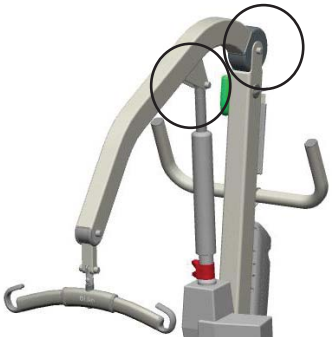
Inspect the legs at the linkage. If the linkage are in poor condition, replace them with Restoration set motor attachment.
(For Spare Part No, see the Spare Parts List)

Reconnect actuator to link arm. Apply plastic hardware covers.



Restoration set motor attachment

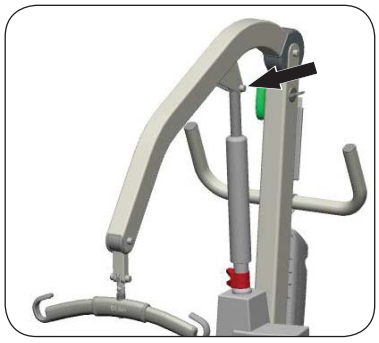
7 Lift arm



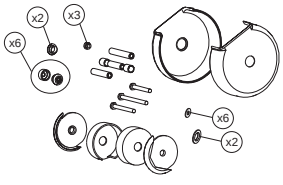
Remove hardware covers.

Remove and lubricate lift arm bolt.
Visually inspect lift arm, plastic covers for wear, cracks or deformation.
Reassemble in reverse order.

Raise the arm and then release,
so that it falls to the lowest position.
If the arm does not fall to the lowest position, the screw is too tight.



Remove and lubricate actuator hardware. Visually inspect actuator plastic bushings for wear. Replace if worn. Reassemble in reverse order.

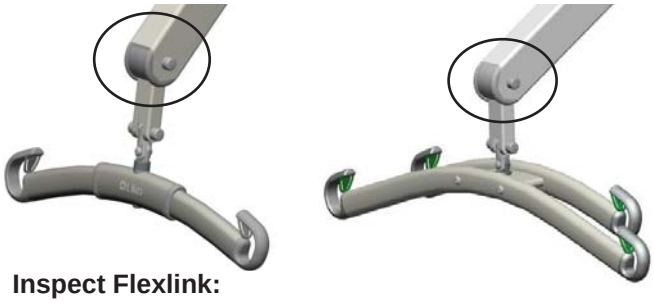


Overhead beam Restoration set
(For Spare Part No, see the Service Manual.)

	Viking XL	Viking L	Viking M
Overhead beam Rest. set needs to be replaced after:	**1020 Ah**	**910 Ah**	**700 Ah**
or			
Replace according to years in use:	**10**	**10**	**10**

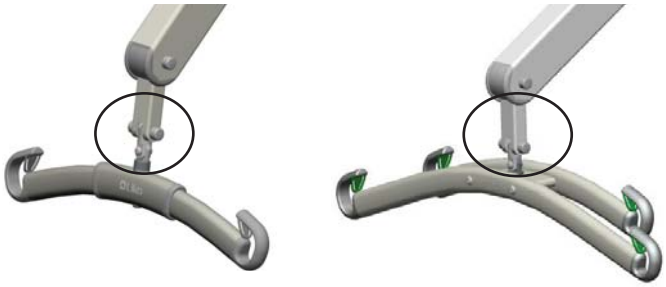
Instructions regarding the check points

8 Flexlink / Lift arm joint / Slingbar bolt



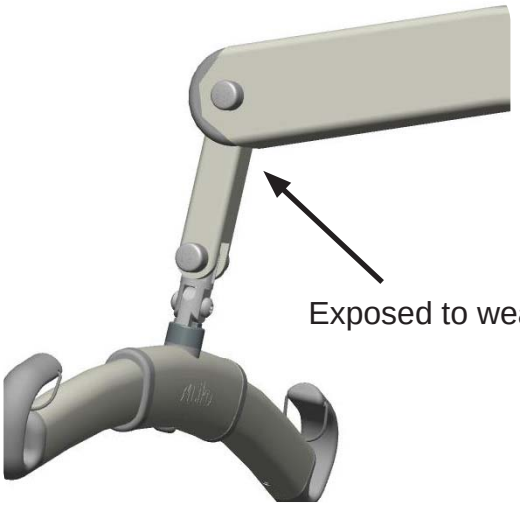
Inspect Flexlink:

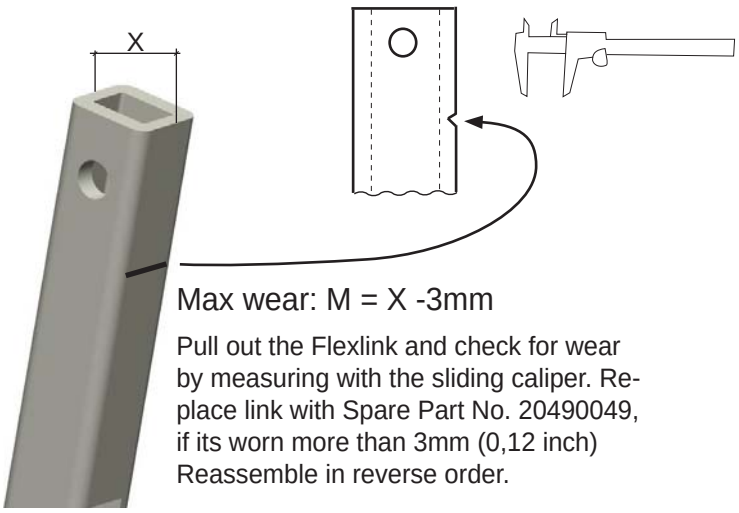
1. Remove covers.
2. Remove, clean and lubricate flexlink. Inspect shell covers for cracks or gaps.
3. Pull out the Flexlink and check for wear. Re-assemble in reverse order.
4. Lift up the slingbar and then release, so that it falls to the lowest position. If the link does not fall to the lowest position, the screw is too tight.



Inspect Slingbar bolt:
(Universal SlingBar and Universal TwinBar)

1. Check slingbar bolt for wear.
2. Remove slingbar centerbolt and bearing, wipe of any dirty, dust or residue. (Universal Twinbar)
3. Reassemble in reverse order pivot slingbar centerbolt within the Flexlink. If the slingbar is binding, the screw is too tight.





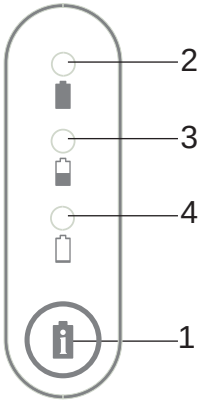
Max wear: M = X -3mm

Pull out the Flexlink and check for wear by measuring with the sliding caliper. Replace link with Spare Part No. 20490049, if its worn more than 3mm (0,12 inch) Reassemble in reverse order.

	Viking XL 1020 Ah	Viking L 910 Ah	Viking M 700 Ah
Flexlink needs to be replaced after:			
or			
Replace according to years in use:	**10**	**10**	**10**

Instructions regarding the check points

9 a) Battery to Control UnitCBL



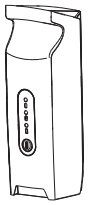
Battery capacity
Check battery capacity by pressing the i button (1).
The following information is displayed:

2 – Green light: More than 50% of battery capacity remaining.
3 – Yellow light: 25% -50% of battery capacity remaining.
4 – Yellow light: 0% -25% of battery capacity remaining.

The indicator lamps light for about 30 seconds before switching off.
Battery capacity is also displayed during lift operation.

Maximum charge is reached after about 5 hours. When the batteries are fully charged, the charger switches automatically to maintenance charging.

The lamps blink alternately (yellow/yellow/green) during charging. A blinking green lamp indicates that charging is complete. When operating time is noticeably shorter than normal, the batteries should probably be replaced. Discontinue charging and replace the batteries with 2006107 Extra battery box.

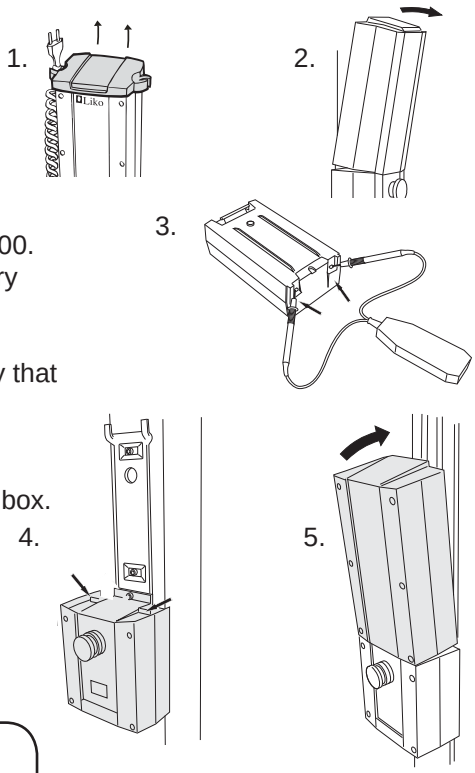


Prod. No.
2006107 Extra battery box

	Viking XL	Viking L	Viking M
Batteries needs to be replaced after:	**408 Ah**	**364 Ah**	**280 Ah**
and:	**816 Ah**	**728 Ah**	**560 Ah**
or			
Replace according to years in use:	**4 and 8**	**4 and 8**	**4 and 8**

9 b) Battery to ”Jumbo” Control Box

1. Remove the charger cable holder.
2. Remove the battery.
3. Inspect V-shaped metal contacts on the batterypack casing for uniformity. Check the battery with the battery tester Part. No. 2101100. A signal should be audible for more than 5 sec. If not, replace battery with spare part 2006106.
4. Inspect V-shaped metal contacts on control box for uniformity. Verify that plastic housing for metal contacts is not damaged/deformed. Tighten screws.
5. Place the removable battery pack into position on top of the control box. Adjust until you hear a clicking sound.



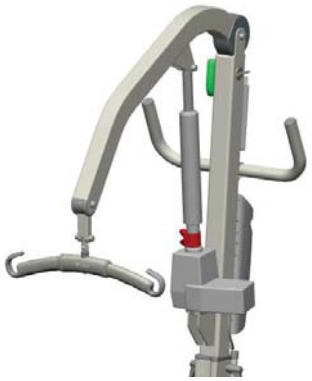
Replace according to years in use: Every 3rd year

Instructions regarding the check points

10 Actuator

1. Visually inspect the actuator and the Outer tube (Outer Tube only on Viking M) for wear, cracks or deformation.

2. Replace the actuator after 700 Ah. (For Spare Part No, see the Service Manual.)



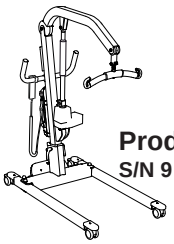
	Viking XL	Viking L	Viking M
Actuator needs to be replaced after:	**1020 Ah**	**910 Ah**	**700 Ah**
or			
Replace according to years in use:	**10**	**10**	**10**

11 Control Unit CBL

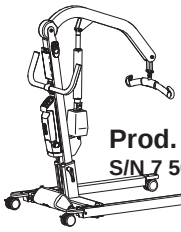
Use LSS or LDS to check that the correct current limit is programmed in CBL20:

	CLIM_1 Power limit for lifting motion (up) (actuator)	CLIM_2 Power limit for widening motion (base motor)
Viking M	8,5 [A] (CBL version 0-3: 9,2 [A])	6 [A]
Viking L	6,4 [A]	6 [A]
Viking XL	8,0 [A]	6 [A]

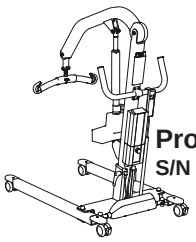
Prod. No. 2040005, 2040015, 2040035
2012-11-15



Prod. No. 2040035
S/N 9 200 001 - 9 300 000



Prod. No. 2040015
S/N 7 500 401 - 7 600 500



Prod. No. 2040005
S/N 7 100 101 - 7 200 200

Changes	Model 2040035 S/N	Model 2040015 S/N	Model 2040005 S/N	Project
2012				
New model of Viking M with fixed handcontrol is introduced. Prod. No 2040035	9 200 001	-	-	1707
2010				
Covers to motor brackets introduced.		7 505 000	-	791
Spring in Outer Tube altered. New screws to fasten the handle. Diagonal profile has been shortened.		7 503 472	-	791
2009				
OuterTube also introduced on Prod. No. 2040005.		-	7 108 587	974
2008				
4 mm shorter middle beam. Link attachment for base motor adjusted.		7 502 500	-	671
Viking M prod. no. 2040015 with new control box and IR hand control.		7 500 401	-	556
2007				
New linkage between legs and motor.			7 107 500	633
New washers (PS 6x12x1) arm-mast			7 107 064	EFR 758
Seal tape at Sling bolt, introduced on Slingbars from s/n 1231718.			-	493
New washers arm-mast PS12x18x1			7 106 528	EFR 694
Holder for Quick Reference Guide, and tape has been added. New washers (TBRB 6,4x12x1,6) in the pivot point on the mast.			7 106 201	519
Old latch back.			7 105 310	619
New Composite Latch.			7 105 034	467

Changes	Model 2040005 S/N	Project

2006

Washer 8,4/20x2,0 has been added to base-width adjustment.	7104347	
New pivot points between arm-mast, actuator-arm, mast-actuator, arm- link and link-slingbar (M6 screw and nuts).	7 103 094	370

2005

New Locking handles.	7 102 079	
New wheels and forks 75mm. Emergency guard for control box.	7 102 064	351
Base motor moved 3 mm back to avoid touching the middle beam.	7 101 100	213
New current limit in control box.	7 101 023	

2004

New Slingbar ”Universal Slingbar 450”.	7 100 862	226
Viking M delivered with the old Slingbar Standard 450.	7 100 382	
Width of base increased with 40 mm. Viking M is from now on equipped with a new Adapter.	7 100 308	

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